# AN ACCOUNT

OF THE

# STATE OF AGRICULTURE & GRAZING

IN

# NEW SOUTH WALES.

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IN

# NEW SOUTH WALES;

INCLUDING

OBSERVATIONS ON THE SOILS AND GENERAL APPEARANCE OF THE COUNTRY,

*AND SOME OF ITS MOST USEFUL NATURAL PRODUCTIONS;*

WITH AN ACCOUNT OF THE

VARIOUS METHODS OF CLEARING AND IMPROVING LANDS,

Breeding and Grazing Live Stock,

ERECTING BUILDINGS,

THE

*System of employing Convicts, and the expense of Labour generally;*

THE

**MODE OF APPLYING FOR GRANTS OF LAND;**

WITH OTHER INFORMATION

*Important to those who are about to emigrate to that Country:*

THE RESULT OF SEVERAL YEARS' RESIDENCE AND PRACTICAL EXPERIENCE IN THOSE MATTERS IN THE COLONY.

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BY

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AND FORMERLY PRINCIPAL CLERK IN THE OFFICE OF THE COLONIAL SECRETARY AT SYDNEY.

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# PREFACE.

AFFAIRS of importance having imposed upon me the necessity of visiting England a few months since, I found myself, on my arrival, assailed from all quarters, and in every company in which I happened to be present, with innumerable questions and enquiries respecting the present state of NEW SOUTH WALES, and especially of its Agriculture and Grazing. For a while I was enabled to answer these interrogatories with tolerable patience; at length, the continual repetition of the same queries began to grow wearisome; and I was induced to think of some more comprehensive method of satisfying curiosity. At the same time, several of my friends represented to me, that notwithstanding the many large volumes that have been published on the subject of this Colony, its rural and domestic economy were still comparatively unknown; and that my experience, and somewhat successful practice, as a Settler, would most probably enable me, in some measure, to

supply the deficiency. In compliance with their request, I have produced the following humble work, in the anxious hope of serving such of my countrymen as may feel disposed to emigate to that rising and interesting Colony. I trust a candid Public will overlook its many imperfections, and give me credit for the sincerity of my intentions; I have experienced and surmounted the privations and difficulties of a Settler, and in this volume have had no object in view, but only to smooth the way for others that may follow me in the same path. I have studied no ornament, but endeavoured to give the details and information I had to communicate in the plainest and most familiar manner; and I am not without hopes, that my present attempt may be the means of stimulating some person, better qualified than myself, to favour the public with a more enlarged history of Australian agriculture. My limits would not allow me to go into any topographical history of the Colony; I have merely confined myself to those subjects on which the most frequent questions were put to me, and on which I perceived information to be most wanting.

JAS. ATKINSON.

*Mereworth, Kent,*
14*th April,* 1826.

# CONTENTS.

# AN ACCOUNT

OF THE

# *STATE OF AGRICULTURE AND GRAZING*

IN

# New South Wales.

## CHAPTER I.

GENERAL DESCRIPTION OF THE COUNTRY—SCRUBS—BRUSHES —FOREST LANDS—PLAINS—ALLUVIAL LANDS—RIVERS AND WATER.

THE various descriptions of country in New South Wales may be classed under the following heads: viz. barren scrubs, brushes, forest lands, plains and alluvial lands; in describing which it will be necessary, in some cases, to make a further subdivision.

The barren scrubs almost every where border the sea coast, and extend to various distances inland; in some places two or three miles; in others, lands of a better description approach close to the water's edge. The soil in these scrubs is either sandstone rock or sterile sand or gravel, covered, however, with a profusion of beautiful shrubs and bushes, producing the most elegant flowers, and affording a constant succession

throughout the whole year, but most abundant in winter and spring; the shrubs and plants growing in these places furnish the Colonists with materials for brooms, but produce little else that can be converted to any useful purpose.—The grass tree, with its lofty flower stalk, is a conspicuous object in these wastes; of the hard and woody but light stalk of this plant the natives make the shaft of their spears, and shooting or fish gigs. Very few trees grow in these places, except a few stinted gum trees, in situations sheltered from the sea winds. Much honey might probably be collected from these scrubs, were bees plentiful in the Colony, and some small profit may possibly be thus made of them hereafter; but with this exception, they scarcely seem susceptible of any improvement. Scrubs of this description are also found in places on the summits of the Blue Mountains, and other high and exposed situations in the interior, producing the same shrubs and plants as on the sea coast.

Brushes may principally be divided into coppice, vine, willow, and indigo brushes. The first kind I have called coppice brushes, as they approach nearer to the nature of coppices in England than any other kind of woods in the Colony. They are not, however, known by that name in the Colony, but are distinguished into iron bark brush, stringy bark brush, &c. according to the kind of trees that predominates in them.—These brushes are found principally in the tract of country included between the sea and the mountains which separate the waters falling into the sea on the Eastern coast, from the interior rivers; and also about the sides and upon the summits of those mountains. They are generally thickest and most extensive towards the sea: there are, however, some large tracts of brush at some distance in the interior, such as Bargo Brush, in the county of Camden, and Wombat Brush, in the county of Argyle. Brushes of this description are principally composed of lofty stringy bark and iron bark trees, thickly set beneath with underwood, composed of several varieties of mi-

mosa, young trees of the kinds already mentioned, and many others. The soil, in places, is very good, consisting of a light vegetable mould upon a clay or loam; it is very light tillage when once properly cleared, and is well calculated for the production of potatoes and grain crops; but the expence of clearing is so great, that unless in the immediate vicinity of a market, or upon a leading road, or thoroughfare, the return to be expected will not warrant the outlay. The principal part, however, of the lands of this description, are very indifferent, and in many places wretchedly poor, consisting of a sterile clay or gravel, and wholly unimprovable.

Vine brushes are mostly found on the sides and summits of steep mountains near the sea. It is here we may see the vegetable kingdom in its most magnificent form, lofty cedar and turpentine trees of the grandest dimensions, with large vines or parasitical plants of various kinds, thick as a man's leg, twining up to their very tops, catching hold of other trees in all directions, until an immense net-work is formed, impervious to the sun's rays. Here are found the elegant sassafras or kalang; the bark of this tree has a spicy aromatic taste, and is much esteemed in the Colony as a stomachic and purifier of the blood; and the whitewood or boula tree, with its dark green foliage and smooth bark, resembling the beech of Europe. The cabbage tree, with its slender stem, rising to 60 or 70 feet high, and circular head, is a conspicuous object in these shades, and is generally found growing wherever any rills of water run down the sides of the mountains; of the centre leaves of this tree the Colonists make very durable hats, split and plaited like chip or straw. Here is also found the fern tree, a very beautiful vegetable production: its stem is about eight feet high and two feet in circumference; the leaves are about three or four feet long, branching out from the top of the stem in a very elegant manner. There are many other beautiful plants and trees produced by the perpetual moisture of these brushes, and the complete shelter formed by their

impenetrable covering. In some places these kind of brushes extend into the low lands, and accompany the mountain streams to the nearest river, or to the sea; to their other productions are then generally added the bangally, much resembling the cabbage tree in appearance, but having some long and wide leaves of a thick and tenacious texture; these the natives tie up at each end in the form of a boat, and use them for carrying water and other purposes. In these lower situations is found the nettle tree, a very singular plant, about 20 or 30 feet high; the bark is nearly white, the leaves are heart shaped and large, of a pale green, and jagged at the edges; these leaves, if unwarily handled, inflict a sting infinitely more painful than the nettle of Europe.

The soil in many of these brushes is extremely rich, but the labour of clearing is immense; and very little land of this description has been hitherto brought into cultivation; it seems, however, well adapted for the production of vines and other fruits, being generally of a light friable texture, and lying in peculiarly warm sheltered situations.

In willow brushes the ground is more or less covered with the white or woolly gum trees, and underneath thickly covered with what is termed in the Colony willow brush, growing to the height of 2 or 3 feet; many of these brushes are very good land, being a light sandy loam, and very fertile, with proper management, well adapted for the growth of barley. This kind of country affords good grazing; the grass growing very freely among the brush, which protects it from the frosts, and these places therefore afford the best winter keep for stock. This shrub is frequently eaten by cattle, especially horses; it affords a very pleasant bitter, and might perhaps be advantageously employed in brewing, as a substitute for hops.

Indigo brushes are not very common; the timber in these is generally white or blackbutted gum; the ground beneath is covered with the native indigo, a very beautiful plant, with a light purple flower. Horned stock are extremely fond of this

plant, and in winter, when the grass in the more open situations is withered by the frost, delight to feed in these brushes, which afford at once both food and warm shelter; the soil in these places is mostly a light free loam, very fertile, and well fitted for agricultural purposes.

Forest lands are variously designated according to the quality of the soil, or the nature and number of the trees growing thereon, such as good, poor, open, or thick forest. It is, however, always to be understood, that forest means land more or less furnished with timber trees, and invariably covered with grass underneath, and destitute of underwood. Under the head of forest lands are included some of the best and most improvable soils in the Colony; they are generally either clay or loam, of various degrees of tenacity, with a layer of vegetable earth on the top, extremely well calculated for the growth of grain. In the county of Cumberland, one immense tract of forest land extends, with little interruption, from below Windsor, on the Hawkesbury, to Appin, a distance of 50 miles; large portions of this are cleared and under cultivation, and of the remainder that is still in a state of nature, a great part is capable of much improvement. The whole of this tract, and indeed all the forest in this county, was thick forest land, covered with very heavy timber, chiefly iron and stringy bark, box, blue and other gums, and mahogany. The quality of forest land, and indeed of most others will be found to be governed by the nature of the rocks and stones that form the basis of the soils; thus, in this tract of forest, in the county of Cumberland, the rocks are either common or calcarious sandstone, ironstone, and in some few places whinstone; these form soils of various degrees of goodness, the whinstone generally the best. In some places small iron stone, not larger than peas, may be found, scattered over the surface; this, wherever it occurs, is a sure sign of a poor hungry soil. In the country westward of the Blue Mountains, and also in the counties of Argyle and Antrim, are large tracts of open forest,

where the basis of the soil is granite; this country is thinly covered with trees, of the white and blue gum kinds, and large blocks of granite, of a coarse texture, and grey colour, are seen lying about upon the surface. This country, though pleasing to the eye, having a beautiful park-like appearance, is poor and seldom adapted for cultivation; but the soil is light, dry, and extremely well suited for sheep grazing, the surface being covered with a thin but very nutritive herbage. In the county of Argyle are some small tracts, where whinstone predominates; this is the finest description of forest land in the country, equally well adapted for grazing or for cultivation; the soil is firm and rich, and the herbage of the most nutritive description.

Extensive plains are a distinguishing feature in the interior of New South Wales. These tracts, although termed plains in the Colony, are very seldom level, but generally a gently undulating surface, destitute of timber, and covered with grass; they extend, with many interruptions, but still forming one great chain, from Liverpool plain, in the county of Cambridge, to Maniroon Plains, to the southward of Lake George, approaching nearer to the sea coast as they extend to the southward; many large portions of this immense tract are occupied in grazing by persons holding tickets of occupation, for which purpose, especially for sheep grazing, it is extremely well adapted, being covered with fine grass and herbage, and generally well watered; very little of this immense tract of open country has as yet been granted, or in the Colonial phrase *located*, to individuals; and a very considerable portion is yet wholly unoccupied in any way. The silence and solitude that reign in these wide spreading, untenanted wastes, are indescribable, and must have been witnessed to enable any one to form a proper conception of them; no traces of the works or even the existence of man are here to be met with, except perhaps the ashes of a fire on the banks of some river. The plain affording little or nothing for the subsistence of the

savage, is wholly abandoned or but seldom crossed by him; the Kangaroos even shun the place, preferring the shade and shelter furnished by the forests; and nothing meets the eye of the traveller, with the exception of a few solitary Emus, to enliven the monotony of the dreary expanse. From the contemplation of this vacancy and solitude the mind recoils with weariness, and naturally turns with pleasure to anticipate some future and not distant period, when these vast and in many places fertile plains, shall be covered by productive flocks and herds, and enlivened by the presence and industry of civilized men. The soil in these plains is of various qualities, according to the nature of the rock which forms the basis; in some places limestone prevails, and occasionally forms a good soil; in others whinstone, which is much better; in others granite, with fragments of white quartz strewed upon the surface, in these places the soil is weak and hungry, but dry and well adapted for sheep grazing, being covered with a sweet though thin herbage.

The alluvial lands in New South Wales are not surpassed in fertility by any in the world; the principal tracts are found along the banks of the Hawkesbury, Nepean, and the various branches of Hunter's River; they consist of vegetable mould more or less mixed with sand of many feet in depth. In some places, the soil, by continual augmentation, has risen above the level of the floods, which has been further aided by the rivers having deepened their own channels, so that many spots formerly flooded are now exempt from that visitation: the greater part of the alluvial lands, however, still remain subject to inundation, and all the liability to loss of crops and other calamities consequent thereon. These floods are much augmented, and the rapid rise of the waters accelerated, by large quantities of timber and still living trees, that have either fallen in accidently, by the banks whereon they stood being gradually undermined by the water, or have been thrown in designedly by the indolent Settlers in clearing the land, rather

than take the trouble of burning them: whenever a tree falls or is thrown into the bed of a river in this manner, a sandbank is immediately formed, and thus the channel becomes choaked up, and the free passage of the water prevented. It is believed by many intelligent persons, that were each Proprietor compelled to clear his own frontage, or some other means adopted to remove these obstructions, so that the water, during the time of its rising, when floods occur, might pass off with ease and rapidity, very few floods would rise so high as to overflow the banks. It is probable, that were these fallen trees removed, some small parts of the present banks might fall in, as the rivers would naturally work their channels both wider and deeper; but any trifling loss to individuals of this kind would be amply repaid by the advantage that would arise from such a quantity of fertile lands being exempted, in a great measure, from such destructive visitations as these inundations.

The greater part of the alluvial lands upon the Hawkesbury and Nepean have been cleared, and are under cultivation; and in the hands of any others than their present ignorant, indolent, and improvident possessors, would produce the most plentiful and valuable crops, as is sufficiently exemplified on the farms of a few individuals where a better system is practised. The soil and climate are admirably fitted for the growth of tobacco, and many other valuable productions. The land is easily wrought, little or no manure is necessary, and the whole attention of the farmer may be directed to cropping his land in a proper manner, and keeping it free from weeds. The alluvial land upon Hunter's River is, generally speaking, in the hands of a better sort of people, by whom it will be managed with somewhat more intelligence and industry. On Shoal Haven River there are a few spots of land unlocated, but the quantity is small, and the quality not very good. Most of the alluvial lands were originally forest; the timber was large, principally blue and flooded gum, with an abundance of the tree known in the Colony by the appellation of the apple tree, which is of

very little value. There are many flat pieces of land in the neighbourhood of the Rivers, that are covered with what is termed *back water* in time of floods; there is no current over these places, and the mud and vegetable matters contained in the water are deposited here in great quantities. This land is very rich and fertile, well calculated for agricultural purposes, but containing little sand, is a very stiff strong soil, and heavy tillage. The whole of the alluvial lands would make most excellent permanent pastures, if laid down with proper grasses; and as fatting pastures would yield a greater profit than in cultivation, as the crops would be less liable to be carried away or damaged by the inundations. They have been found by experience to be sound healthy pasture for cattle and sheep.

The following remarks on the cultivation of alluvial lands, and the effects of the floods, are by a Gentleman in the Colony, of long experience, and accurate observation:—

"Notwithstanding the fertility of the soil upon the Banks of the Hawkesbury and Nepean, the farmers there run much greater risks in cropping their lands than in any other part of the Colony. If the season proves wet, the wheat, in consequence of the richness of the soil, grows so rank in the straw, that it is liable to be laid by the winds and rain, and to rot upon the ground; and where it is not laid it is very light in the ear.—In very hot seasons the soil in some parts binds so hard, that the roots of the wheat cannot tiller and spread, and in other places, where there is much sand, it is burnt up: but when the season proves favorable, the crops are immense.

"The Farmers upon these banks also run very great risks from the floods, which do not return at any stated periods, and therefore the crops are liable to be destroyed by inundation in every stage of their growth. If the land is overflowed when the wheat or other grain is just sown, it generally swells and bursts, or rots; and in all the low grounds it is totally destroyed, as the water is some time before it runs off, or is absorbed by the earth. If there should be no flood till the plant has begun to spindle, or is in blossom, or nearly ripe, and the waters should then overflow the banks, and rise above the upper joint of the straw, a mortification will immediately take

place at the bottom of the pipe or stem that supports the ear, close to the joint. The end of the stem when drawn out of the sheath will appear white for two or three inches, with a small point like a needle, and smell very offensive. A field of green wheat in full ear after the blossom has gone off, will appear, when the flood subsides, as if it had sustained no injury from the water; the ear for a time will continue green and full, and flatter the unfortunate farmer with the hope of a crop, but, upon minute examination, all communication will be found to be cut off at the upper joint between the stem and the root, the grain in the ear can receive no further nourishment; so, whether the crop is in spindle, in blossom, or in full ear, it is totally destroyed.

"The inundation which happened in March, 1806, carried away grain and live stock to the amount of £35,000. The waters on the Nepean rose ninety-two feet above the common level of the river, threatening to carry every thing away before it. At the Hawkesbury, houses, barns, stacks of corn, together with some thousands of hogs and other live stock, were swept away, leaving nothing but desolation and ruin behind."

In the early days of the settlement, the Colony was almost wholly dependent upon these flooded lands for its supply of grain; the inundations were then followed by a scarcity that sometimes almost amounted to a famine; cultivation, however, within the last 14 or 15 years, has principally extended on the forest lands, and these inundations, though still disastrous to the immediate occupiers of the Banks, are of less importance to the general prosperity of the Colony. It is however to be hoped, that the greater part of these lands will, before long, be converted into fatting pastures, for which, as before observed, they are admirably adapted.

The great defect of New South Wales is the want of navigable rivers; none have been yet discovered that are navigable any considerable distance, and the large tracts of fertile plain in the interior are in consequence inaccessible to water carriage; this circumstance will occasion the Colony for a long

period to be more a pastoral than an agricultural country; and cultivation and colonization will extend most upon the sea coast, and in the neighbourhood of the few rivers that are navigable; there are, however, plenty of fertile lands in these situations for all the Settlers that will arrive for many years to come. In the lower parts of the Colony, between the mountains and the sea, the country in many places is very scantily supplied with water, and what there is to be found is frequently of a very bad quality. The higher parts, and to the westward of the mountains, are abundantly supplied with excellent water. Running streams, small lakes, and ponds, are every where to be met with.

## CHAPTER II.

NATURAL PRODUCTIONS—TREES—SHRUBS—GRASSES—FOSSILS AND MINERALS—QUADRUPEDS—FISH—BIRDS—REPTILES—INSECTS.

To describe the natural productions of this vast Continent in a complete and satisfactory manner, would be utterly impossible in a work of the limited nature of the present; and besides would require a degree of botanical and other scientific knowledge, to which the Author makes not the smallest pretension. The brief sketch here presented, therefore, will be principally confined to those objects which either are or may be capable of being converted to useful purposes.

The timber of every uncultivated country forms a very important part of its spontaneous produce, and is generally the first article that can be made available to the domestic wants or foreign commerce of the early settlers. Yet so difficult is it to prevail on ship-builders to make use of any new species of wood; and so great is the force of prejudice in men of this description, in favour of English oak and other kinds that have been in use for many ages; that for several years succeeding the settlement of the Colony, the timber of New Holland was believed to be of a very inferior description, and wholly unfit for ship-building. Many specimens were at different times sent home, and uniformly rejected, and pronounced worthless by our builders. It is true many of these specimens were very ill selected, there being few persons in the Colony competent to form any correct opinion on the subject. Experience has

now, however, fully demonstrated that there are several kinds very useful and durable, the best proof of which is, that they have lately become a considerable and increasing article of export, and several cargoes have been sold in London, at prices that have fully remunerated the Merchants for their expenses in importing them. None has as yet, however, found its way into our naval yards, sharing in this respect the fate of teek, and other woods, confessedly superior to English oak.

I shall here endeavour to give a list of the most common woods of the Colony, and the uses to which they are applied, as far as the extent of my observation and humble abilities will allow.

*Rose Wood.*—Found principally at Port Macquarie, and Hunter's River. The trees are large, and generally sound quite to the heart; the grain is close and fine, and the texture and appearance when worked extremely beautiful, resembling the best mahogany. This wood is much used by Cabinet-makers, and makes very excellent furniture; it also makes very good shells for blocks, not being liable to split.

*Cedar.*—Found principally at Port Macquarie, Hunter's River, and the distract of Illawarra. Its grain is not so compact as rose-wood, but still makes good furniture; Hunter's River cedar is most esteemed, the texture being very fine and beautiful; in colour it resembles Honduras mahogany. It works readily when fresh cut, shrinks greatly, hardens by exposure, and when dry is very light. It is much used for doors, window frames, and wainscoting in houses; and also makes good board for boat-building, and useful pannels, frames, &c. for gigs or other light vehicles.

*Coal River Pine.*—Found at Hunter's River; is not much used, but seems more of the nature of ash than any other European tree.

*Moreton Bay Pine.*—Found in great abundance at Moreton Bay; but its recent discovery has not allowed sufficient time to make any trial of its qualities.

*Blue Gum.*—This is perhaps the most generally useful of all the Australian woods. The grain is close and compact, the timber heavy, and of a red colour. It is found almost every where, but of the largest dimensions, and most abundant, near the sea coast. Large quantities of it have been exported to England in the shape of plank, and its merits have been duly appreciated in the London market. It is extensively used in the Colony in ship and boat-building, and has been found very lasting and durable. The smaller sticks make good lower masts, yards, and booms, being extremely tough. It is used in house-building for beams and flooring boards, and also by turners in common articles of furniture. It makes good posts for fences, resisting the alternations of wet and dry better than any other wood. It splits well, and saws easily when green, but gets extremely hard when seasoned. It is bent into hoops for the tilts of waggons and carts. In the county of Argyle this tree grows smaller, and seldom splits well, but is very sound, and useful for sawing.

*Black-butted Gum*—grows mostly in low lands near the sea cost; is a very large tree, and probably next to the blue gum in usefulness; the grain is not so compact, and the wood is of a brown colour.

*Flooded or Water Gum*—is found in low situations, like the last variety, which it much resembles in quality; both kinds are much used in house-building.

*Spotted Gum.*—Found in abundance about Shoal Haven and Jervis's Bay. Is remarkable for its lofty straight stems, with a grey bark, spotted with white; it has not been much used, and is probably an inferior variety.

*White Gum*—is found in the county of Argyle, and other places westward of the Blue Mountains. It is a tough wood, very fit for wheelwright's work, but the grain is not compact, and it is probably not very durable; when free of gum veins, to which it is very liable, it makes good flooring and weather boards, being of a good white colour.

*Red Gum*—grows principally about the sea coast, is very full of gum veins, and when tapped yields an immense quantity of a dark extractive matter, highly astringent; it is esteemed an inferior variety.

*Woolly Gum.*—Found in the county of Argyle, and country to the southward. Has a low trunk with wide spreading branches, and more foliage than the generality of Australian trees. The wood is very inferior, of a coarse texture, and not durable.

*Box.*—This is a very useful wood, of a firm compact texture, tough and durable. The trees are handsome and well grown, the bark is strong and close, possessing much of the tanning principle, and is very useful in constructing huts and temporary buildings; this tree abounds in all the forest lands in the county of Cumberland and cow pasture district; and is much used for boards and joists in house-building, and also in wheelwright's work.

*Iron Bark*—is a tall straight tree, with a small top, and scanty foliage; the bark is extremely rough, of a dark colour, and very hard, from whence it derives its name. The wood of this tree is of a dark red colour, very hard and heavy; it splits readily, and makes excellent shingles for the roofs of buildings and capital rails for fences. It would make treenails for ship-building; would be useful in millwork, or any other purpose where strength and durability are required. This tree abounds in the county of Cumberland and many other parts of the Colony.

*Stringy Bark.*—This tree is perhaps the most useful to the Colonists of any in the country. The wood is of a good quality, of a brown colour, splits and saws well, not much subject to gum veins; is very much used in building and wheelwright's work, and in fencing and paling. Is found diffused in almost all parts of the Colony; the bark is much used to construct huts and temporary buildings, being of a fibrous,

tenacious texture, and parts readily from the wood; the inner bark is frequently twisted into ropes for many temporary uses.

*Turpentine*—is very conspicuous from its peculiar dark green foliage; is found almost everywhere near the sea coast, but not in great plenty. The wood is of a brown colour, and good tough quality. Is frequently used in building; and makes good oars and handspikes.

*Mahogany.*—A tree resembling the stringy bark, but not so rough coated. The wood is of a dark red colour, hard and heavy—much used in building, and also by turners, for bed posts and other articles of common household furniture.

*Sassafras or Kalang.*—This is a beautiful tree found in vine brushes near the coast. The bark, as already mentioned, is aromatic, and used medicinally in the shape of a decoction. The wood is white and very light, but I am not aware that it has been applied to any useful purpose.

*Whitewood or Boula.*—Found in the same situation as the last. The wood is white, but heavier than sassafras, but like it, I believe, its qualities have not been tried.

*Forest Oak.*—This tree in outward appearance much resembles the scotch fir. The wood is well known in England by the names of Botany Bay wood, or beef wood. The grain is very peculiar, but the wood is thought very little of in the Colony; it makes good shingles, splits in the Colonial phrase from heart to bark, but these shingles are not near so durable as iron bark, but possess the advantage that they may be nailed on without boreing with a gimblet.—Is found almost every where.

*Swamp Oak.*—Much resembles the last; grows in wet places and along the sides and in the beds of rivers and streams. Is also used for shingles.

*Red Honeysuckle.*—A low tree, found about the sea coast. The wood of this tree is of a close short texture; and much used for timbers of small vessels; and makes excellent naves for

wheels. The ashes yield a considerable quantity of pot ash for the soap-boilers.

*White Honeysuckle.*—Found in various parts of the interior. It much resembles the red. The wood makes good shoemaker's lasts.

*Myrtle.*—This is a shrub growing about the rocky banks of creeks and rivers in various places; it reaches the height of 20 or 30 feet, but does not assume the form of a tree, growing clustered together in the nature of underwood. The wood is very compact, tough, and heavy; bends readily when green, but gets very hard when seasoned: makes excellent swingels for thrashing flails, and is used by the natives for their clubs or waddies.

*Light Wood.*—A small tree found in the county of Argyle and other places; makes good axe helves, being tough and light.

*Black and Green Wattle*—are very common every where. The bark of the black wattle contains a large proportion of tannin, and is much used by the tanners of the Colony. In the shape of solid coagulated extract, obtained by boiling the bark, it has been sent to England, and used with success. The young saplings of these trees, cut and seasoned, make excellent handles for pitch forks and rakes; the old wood, when of curly growth, makes good heads for mauls.

*Currajong*—is found in many parts, but not very plentiful; the inner bark of this tree, beat and twisted, forms ropes nearly equal in strength to Manilla coir.

The above are the principal Australian trees; there are some others distinguished by the Colonists by the names of bastard iron barks, bastard box, bastard stringy barks, gum box, &c. but they differ but little from the kinds from whence they derive their names.

Much care is requisite in seasoning wood in the Colony, especially in spring and autumn; any long continued exposure to the sun at those seasons, when they contain most sap, causes

such a rapid evaporation of the juices, and such a quick contraction of the vascular system of the timber, that the wood is very apt to cone and cast extremely. I have found the best way to cause the timber to be sawn, for the purpose intended, as soon as felled, and then to immerse the board, &c. in water for at least six months; the juices are thus gradually drawn off, and the vessels contracted; it may then be taken out and dried, but should not be too suddenly exposed to the full influence of the sun and air.

The greater part of the full-grown trees are uniformly decayed at the heart; and the best timber is found to be, if not exactly the sap, at least the newly formed spine. The first specimens sent home were squared logs; the hearts of these being decayed, caused them to be rejected by the ship-builders. The late exportations have all been made in sawn plank, of various thicknesses; none but the prime wood has thus been sent to market, and the prices obtained have shewn the plan to be judicious.

No very certain inference of the quality of the soil can be drawn from the species of timber found growing upon it.—The iron bark, stringy bark, and spotted gum, generally grow in poor gravelly land. The box, blue and white gums, grow in good clay or loam; swamp oak abounds where the land is wet, cold, and generally poor. With the exception of alluvial land, good timber is very seldom found upon good land. The fertile plains in the interior are wholly destitute of it. The best whinstone forest lands in the county of Argyle are very thin of timber, and the trees are small, stinted, and useless, except for firewood. In the county of Cumberland, the best forest lands are invariably thinest of trees; and in general it will be found the best lands are least encumbered with timber; this, however, does not hold good of granitic soils, which are generally open and free of timber, and sandy weak land.

Very few of the shrubs have as yet been converted to any

beneficial purpose; many of them might probably afford useful materials in the arts, and also in medicine. The excellent and indefatigable King's Botanist, Mr. Cunningham, has, I believe, pointed out many to medical gentlemen, which he imagined might be possessed of particular properties; but no person has yet been found possessed of sufficient science or inclination to make any experiments on them. A species of sallow, growing about the sides of rivers, furnishes good materials for basket-making, though not equal to osiers. The wood of the warrataw or native tulip, the most magnificent flower of New Holland, has also been applied to the same purpose. At certain seasons of the year, the dwarf honeysuckle, which is very abundant in barren scrubs and brushes, yields an immense quantity of beautiful transparent honey; it is found standing in large drops among the filaments of the flower cone, and might be easily collected by simply pressing the cones in a jelly bag. There are no indigenous fruits worth mentioning: the native cherry, five corners, jibbong, and others, are mere tasteless berries. The native currant is a fine pleasant acid, resembling the cranberry; it makes a very agreeable preserve with plenty of sugar. The burwan is a plant with leaves very much like the cocoa nut, growing out from a stem about a foot high; at certain seasons it produces a flower, which is succeeded by a cluster of nuts, enclosed in a hard woody shell; this nut in its raw state is a poison; the natives, however, convert it into a very pleasant and nutritive article of food. They first roast the nuts in the ashes of their fire for a short time; then crack them between two stones, separating the kernels and breaking them also; they then roll up a piece of bark in the form of a tube, and placing some grass or other substance to prevent their escape, immerse them in a running stream for twelve hours; they are then good and wholesome food, tasting much like roasted chesnuts. The burwan is found in great plenty in the scrubs and poor forest lands near the sea coast.

The grasses and wild herbage form a most important part of the spontaneous productions of New South Wales; and, in this respect, the Colony justly claims precedence over many uncultivated countries; since by their aid alone, grazing and breeding live stock have been carried to an extent that is really astonishing.

The principal grasses are, the oat grass, kangaroo grass, two sorts of rye grass, a variety of the fiorin, timothy, &c. Of these the oat grass is the most generally diffused; it affords good pasturage, and is eaten by all kinds of stock, but does not stand the winter. The kangaroo grass is found in low and warm places near the coast; it grows with an upright stalk to the height of eighteen inches or two feet, has a few blades at the top, of a fine green, but is destitute of leaves at the bottom; it is relished by horned cattle, but does not feed horses or sheep well, being probably too succulent, and those animals delighting most in a short close bite. The other descriptions of grass above mentioned, are not found anywhere in very great plenty; the rye grass seems most to affect whinstone lands, and the timothy is found in sands and granitic soils. There are two or three varieties of rib grass; also chichory, trefoil, burnet, and some other herbs, which stand the winter, and in that season afford good food for sheep. In the swamps and wet places in the county of Argyle, a coarse sedgy grass abounds; it is not eaten by cattle unless when young. In that part of the Colony, there are many low places between hills, where the fall is not sufficient to enable the water to work itself a channel; and the surface being also covered with coarse grass, encreases the difficulty; the water, therefore, in rainy seasons, spreads about upon the surface, until it becomes completely saturated with moisture: these places are termed swamps in the Colony; but they certainly do not deserve the name, since it is always possible to ride over them in the wetest season. By simply cutting a small ditch to convey the

water from the hills into the nearest stream, I have converted these places into sound and productive meadows: and have made from them a good quantity of hay, much relished by cattle in the winter season, and have obtained besides a good after-grass, of great service to my working oxen in the autumn.—In the unoccupied districts in the interior, and also in those tracts that are only used for the purposes of grazing, the grass in winter becomes withered by the frosts, and assumes the appearance of bad coloured hay; in this state it is refused by the cattle; and as it impedes the growth of young grass, the common practice is to set fire to it. The Natives also pursue the same system, setting fire to the thick brushes and old grass every summer; the young herbage that springs up in these places, is sure to attract the kangaroos and other game; and the horned cattle are also very fond of feeding upon this *burnt ground*, as it is termed in the Colony; they should, however, be kept from it as much as possible till it has acquired sufficient growth to form a good bite, as they pick about upon it before it is in a fit state to yield them any nourishment, and thus injure their own thriving materially. In dry seasons these periodical burnings sometimes assume a truly awful appearance; the country seems on fire in all directions; and if the weather is calm, is enveloped in dense smoke. It is no doubt the means of destroying a great quantity of useful feed, but in the interior districts the practice is unavoidable; in the more settled and cultivated parts of the country it is frequently dangerous, and always injurious, and should be put a stop to by every possible means.

No person, to my knowledge, has yet tried any experiments to ascertain how far any of the native grasses might be improved, or made more useful by cultivation, or in what proportion they are nutritive, when compared with European grasses. It is true, very few of them will preserve their verdure through the winter, even of that mild climate, and some of them are also said to be annuals: certain it is, that keeping them close fed,

so as to prevent them from perfecting their seeds, will soon totally destroy them. In many parts of the country, formerly most abundant in grass, there is now scarce a blade to be seen. I am of opinion, however, that some of them might, upon trial, be found worthy of cultivation. In alluvial lands, a kind called blady grass is found; this is a very coarse variety, the ribband being half an inch wide, and it is probably not very nutritive; cows, however, fed upon it, yield a good quantity of milk.

In all low and warm situations near the sea coast, the grass grows high, and generally preserves its verdure throughout the winter; but is probably not so nutritive as in the higher lands, where it is withered by the frosts, but produces a shorter and sweeter bite in summer, and a more close and compact sod.

The useful fossil or mineral substances hitherto discovered are very few. Freestone, of a good quality, is found at Sydney and Parramatta; it hardens by exposure, is much used in building, and also makes very good grindstones, especially that of the latter place. This kind of stone is also found in great plenty in various other parts of the Colony. Whinstone and granite, where they abound, furnish excellent road materials. Limestone, of a good quality, is not found any where to the eastward of the Blue Mountains. To the westward of those mountains, very fine limestone has been discovered, especially in the neighbourhood of Bathurst, and in the country to the southward of Lake George: at this latter place very fine statuary marble, and other varieties, were found by Mr. Trosby. Very fine limestone is also found at Barramarragoa and Murroowallin, in the county of Argyle. Slate and ironstone, of good quality, have been observed, but no attempts have yet been made to convert them to any useful purpose. Coal is found very abundant at Newcastle; the mines at this place have been worked for several years; large quantities are consumed in Sydney, and a considerable quantity exported to the Isle of France, Batavia, and other places.

The Colony is extremely favored, in being totally exempt

from the ravages of ferocious beasts; none being found in any part which may endanger the personal safety of the Settlers. The native dog is a small species of wolf, not much exceeding the English fox in size, but stands higher, and is stronger made, but not so swift: it is of a black or red colour, though sometimes dirty white. It forms no burrows in the earth, but inhabits rocks, hollow trees, or thick brushes. The female produces about six or seven at a litter. This animal, unless the flocks are carefully attended, will commit serious depredations among sheep: it sometimes also will steal a fowl from the roost; but the extent of its ravages, where common care is taken, is seldom very important. It is not very swift of foot, and easily taken with good dogs. The kangaroo dog, a large variety of greyhound, is usually employed for this purpose. The Agricultural Society has very patriotically offered a reward of half a dollar for every brush brought to any of its members; and an annual reward besides for those who kill the greatest number. The effect of this measure has greatly reduced their numbers in many of the grazing districts in the interior, where they were before very abundant.

The native cat is a carnivorous animal resembling the weasel; it is of a dark brown or black colour, spotted with white; this animal is a serious annoyance in the poultry yard, frequently carrying away young chickens. It inhabits holes in decayed trees; and the best way to get rid of this and many other kinds of vermin is to cut down and burn all the decayed trees in the neighbourhood of the farm yard.—The above are the only two animals in the country strictly carnivorous.

The rat, or native rabbit, has all the habits of the domestic rat of Europe; the form of the head is rounder, and the ears longer, more resembling the rabbit; its tail is long and bushy. It is not very numerous any where.

The kangaroos are of four kinds, viz. the burreo, or forest kangaroo; the wallabee, or brush kangaroo; the padgy mellan, or brown kangaroo; and the wayrang, or rock kangaroo.

There is also found far in the interior another variety, called wallaroos; they are much larger than any of the others.—The different varieties of this animal furnish the principal and indeed only objects of chase in the Colony worth mentioning. The form of the kangaroo being well known, it is unnecessary to describe it here. The forester is the largest of the common kinds, frequently weighing 150lbs. It is seldom found in an open country, delighting in forests that have occasional thickets of brush. In unoccupied tracts it is sometimes seen in flocks of 50 or 60; but its destruction is soon effected when the country becomes inhabited, as the female brings but one at a birth. This animal is exceedingly swift when first started, going off at a great rate, by leaping on its hind legs, covering 12 or 14 feet at each bound; it, however, soon gets tired, and is easily taken by good dogs: when hard pressed it turns upon its pursuers, standing erect, and fighting the dogs most resolutely. It has three toes on its hind feet, the middle one of which is long and pointed; supported by its tail, it strikes forward with this dangerous weapon, and inflicts severe wounds on the dogs. It requires five or six good dogs to master a large animal. Its tail does not seem of much use to it in running, unless to preserve its balance, as it never touches the ground. The animals of this kind that are not quite full grown are termed flyers; they are exceedingly swift, and can seldom be taken unless the ground is soft.

The wallabee and padgy mellan seldom exceed 30 or 40lbs. weight; they inhabit brushes, and afford good sport in the chase.

The wayrang is about the size of the two last kinds; it inhabits among rocks and places difficult of access. It differs from the other species in having a long bushy tail.

The flesh of all the species of kangaroo is wholesome and nutritive; it has no fat, except a small quantity round the root of the tail; this part of the kangaroo makes excellent soup, highly esteemed in the Colony. The skins make good

leather, and also form an article of export; they are worth in the Colony from 1*s.* to 3*s.* each, according to their size.

The wombat is an animal that forms burrows in the earth, and lives upon roots and herbs ; its flesh is good eating being very fat. It weighs sometimes 80 or 100lbs.

The coolor or maingee is of the sloth kind; it inhabits the hollows of trees, and lives upon their leaves; its weight is about 12lbs. The Natives are extremely fond of its flesh, which appears to be a delicate meat.

Four species of the flying squirrel and two kinds of opussum inhabit the trees, and form a principal part of the animal food of the Natives; the fur of these creatures might probably afford good materials for hats.

The kangaroo rat is a small animal about the size of a rabbit; it runs very swiftly; the flesh is of little value and they are not very numerous.

The bandicoot is about the size of the common rat; it burrows in the earth, and feeds upon roots; its flesh is highly esteemed by the Natives.

The porcupine of New South Wales is a small kind, in nothing differing from the same animal in other places; its flesh is very fine eating.

The above are I believe all the principal quadrupeds hitherto discovered on the continent of New Holland.

The coasts of New South Wales abound with fish; the black Natives are the principal fishermen, and from them the town of Sydney derives its supply of that article. The best kinds are snappers, king fish, rock cod, bream, mullet, whiting, and mackarel. Rock and bed oysters, lobsters, crayfish, and prawns, are also found in many places. The rivers falling into the sea on the eastern coast have plenty of perch and eels. The Lachlan, Macquarie, and other rivers in the interior abound with fish of a large size and fine flavour: they have not, I believe, been properly described as yet, but resemble the rock cod and mullet of the sea cost. It is a very singular cir-

cumstance, that no eels have yet been found in any of these rivers.

The feathered tribes in New Holland are extremely numerous, and many of them remarkable for their singular character and beautiful plumage. The emu, when standing erect, is sometimes five or six feet high; it has no wings, but runs very swift; it is covered with feathers of a very singular kind, and immediately under the skin is found a large quantity of fat, which yields a fine oil, very useful for oiling shoes and other leather articles. The emu is taken by hunting it with the greyhound, and affords good sport; it is principally found in open countries, and feeds upon herbs, flowers, and seeds of trees. That singular bird, the black swan, is found upon the lakes and rivers of the interior, but is very shy, and disappears as soon as the country becomes inhabited. Wild ducks are very abundant every where in the interior: they are of four kinds, afford good sport, and are excellent eating. Pigeons of several species abound throughout the Colony; they are easily shot, and are fine eating. Snipes, plovers, and quails are also found, but not very numerous. The finest bird, however, of the game kind, is the wild turkey or bustard; it is nearly as large as an English goose, and excellent eating, but they are not very common. My limits will not allow me to enumerate the many other birds with which this country abounds, and I shall therefore merely mention a few of the most remarkable. There are several species of the parrot and cockatoo kind, with most beautiful plumage; they are frequently very troublesome in corn fields, and also destroy the buds of fruit trees. The common crow and three species of magpye abound every where. There are several kinds of hawks, that will sometimes steal young chickens, but are not otherwise mischievous. The native pheasant is remarkable for its beautiful tail, but is not fit to eat. There are no birds in the Colony deserving the character of singing birds.

The reptile tribe is rather numerous, and some of them

highly dangerous: of these, the most fatal is the brown snake; its general length is about five feet, the body is brown above, and yellow beneath; the head is large and flat, and the mouth wide; its poison is exceedingly active and virulent, and unless an immediate remedy is applied, inevitably proves mortal; the Natives, when bitten by them, tie a ligature above the place, and then scarify and suck the wound, spitting out the blood. This is perhaps the only safe and effectual remedy that can be applied.—The diamond snake sometimes attains the length of 13 or 14 feet, and as thick as a man's leg, but its bite is not dangerous; the flesh is highly esteemed by the Natives. Scorpions, centipedes, and tarantulas are also found, but their poison is not very dangerous, and they are not numerous.

The insect tribes in New Holland afford a wide and entertaining field for the naturalist, many of them being extremely curious and beautiful; but it is unnecessary to enumerate them here. The most formidable to the farmer is a small dark caterpillar, that sometimes appears in vast numbers, committing great ravages upon the grass and growing crops of corn. Locusts are plentiful in the summer, but have never been known to do any injury. Flies are very numerous and troublesome in summer, and great care is requisite to protect meat and other articles from their ravages. Mosquitoes, except in low situations near water, and where there are thick woods in the neighbourhood, are not very numerous, and seldom of any serious inconvenience. The town of Sydney, in the summer of 1824, was visited by immense swarms of these insects, a circumstance never experienced there before; and what was very remarkable, the large blow flies, that had formerly been very troublesome, disappeared immediately the mosquitoes made their appearance.

## CHAPTER III.

STATE OF AGRICULTURE—SYSTEMS PURSUED BY THE DIFFERENT CLASSES OF SETTLERS—WORKING CATTLE AND IMPLEMENTS—CROPS CULTIVATED—REMARKS ON VARIOUS IMPEDIMENTS TO THE PROGRESS OF IMPROVEMENT, AND ON THE FREQUENT FLUCTUATIONS IN THE PRICES OF PRODUCE—HORTICULTURE.

If a foreigner who had travelled through England, were afterwards to visit New South Wales, he would scarcely be able to persuade himself that the inhabitants where derived from the same stock; he could hardly believe that the people, who, in the mother country, cultivate their lands with such persevering industry and intelligence, should here become so extremely slothful and negligent; yet such is the case—the state of agriculture being rude and miserable in the extreme.

The first Settlers in the Colony were obtained from among the military and convicts; very few of these men had any knowledge of agriculture, being mostly derived from inhabitants of great towns, or from the very lowest orders of the people; thoughtless and negligent, as might naturally be expected from their early habits and subsequent life, with very little regard for the comforts and conveniences of civilized society, their whole desires were confined to the obtaining sufficient food: clothing, except what decency absolutely required, they had little regard for; and to bring up their families with respectability, and make a comfortable appearance in the world, never once entered their minds. Their absolute wants being satisfied, the whole surplus produce of

their labour was expended in intoxication and debauchery. Men of this description were but little calculated to improve and beautify the face of the country, and develope its agricultural capabilities; accordingly, their farms exhibit to this day nothing but a scene of confusion, filth, and poverty. Their first necessarily rude habitations of bark, are still unreplaced with more comfortable dwellings of brick or timber; and their families have been suffered to grow up without education, useful knowledge, or religious principles. I beg here to be understood as only alluding to the early Settlers, and the lower order of the present—what are technically termed in the Colony *Dungaree Settlers*, from a coarse cotton manufacture of India which forms their usual clothing: a more improvident, worthless race of people, cannot well be imagined. It unfortunately happens that the greater part of these people have been located on the banks of the Hawkesbury and Nepean, and in the district of Airds, the best lands in the Colony. I shall first describe their method of cultivation, and then proceed to that of farmers of a better description.

The first step in commencing a farm of this kind, is to cut down a few trees, and erect a bark hut; this is effected by setting up corner posts of saplings, surmounted by plates, and the frame of a roof of small poles. Some large sheets of the bark of the box or stringy-bark are then procured; some are set up on their ends to form the sides, and others laid up and down on the top to form the roof, with one or two long pieces lengthways to form the ridge, securing the whole by tying it with strips of the inner bark of the stringy bark; a space is left for a door, and a square hole cut for a window, and pieces provided to close these apertures at night; some long pieces are then built into the form of a chimney at one end, and sods placed inside to prevent their catching fire. Care is taken to give the different sheets sufficient overlap to allow for their shrinking, and also to give the eaves sufficient projection to carry the rain water from the walls; a trench is

dug round to carry off the wet; and thus a habitation is built in the space of a few hours, that will resist the utmost inclemencies of the weather; and many of the early settlers have lived in no better for more than 20 years. The interior is then furnished with platforms of bark for bedsteads, and a sheet of the same material for a table; some blocks of wood supply the place of chairs; and these, with an iron pot, frying pan, bucket, tea kettle, tin dish, and a few tin pots and pannikins for drinking out of, complete the whole essentials of the establishment. Blankets and flock mattresses form the bedding; a few bags contain clothes, flour, tea, sugar, &c. and perhaps the Settler is sufficiently rich or has credit to procure a small steel mill and wire sieve for grinding and dressing his wheat into flour. Many of these people possess nothing more than what is here detailed, with the exception of a few of the most necessary tools.

The hut being erected, they proceed to fell more trees; this is done with an axe, the edge of which is about two and a half inches, with a large eye, and weighing about 6lbs.; the trees are cut through with this at about three feet from the ground. Having felled as many as they think will clear sufficient ground for their first crop, they next lop off the branches and pile them round the middle of the trunk so as to burn it in two pieces, these are afterwards rolled round so as to form one fire. The smaller trees are also cut up and rolled to the large ones; thus the ground is cleared, leaving the stumps in the land. The next step is to break up the soil with a large hoe, 11 inches long by 7 inches wide, the handle is usually rather short; this the labourer raises over his head, and brings down with all his might. It would surprise an English farmer very much to see how effectually this implement will break up land when it is not too hard. If the ground has much grass upon it, they suffer it to lay a short time to wither, and then go over it again with a hoe before it is sown; but if there is not much grass, and the land crumbles in breaking up, it may be

sown immediately. Wheat is sown broadcast, and chipped in with a hoe to cover it. But the most usual first crop is maize; this is planted in the month of October; while it is growing the Settler is occupied in putting some kind of fence round his crop, frequently nothing but boughs and brushwood of the rudest description, in earthing or hilling his maize, or in felling and burning off more land against the season for sowing wheat. The maize, if put in early, will be ready for pulling in March or April; the cobs are then gathered in, and put away in a loft, formed with some sheets of bark in the roof of the hut, and the stalks pulled up and burnt. The ground, without further preparation, is now sown with wheat, and the seed chipped in with a hoe. The wheat will be ripe in November; as soon as it is reaped, *stubble corn* or maize is planted, perhaps even before the wheat sheaves are carried off; after the corn is above ground, the spaces between the holes are chipped over with a hoe. This maize will be ripe in May; but before that time arrives, the wheat seed time has come round again; wheat is therefore broadcast among the standing crop of maize, and chipped in as usual: thus two most exhausting crops are raised from the same land in a year. Sometimes, however, from the backwardness of the seasons, or other causes, it is impossible to do this; the crop then becomes alternate, wheat one year and maize the next; and this is the only rotation the land ever obtains; many even neglect this most important point in good farming, but sow wheat on the same land, year after year, for a succession of seasons.

The consequence of this miserable system is, that the land in a few years gets exhausted, and having very little tillage, is entirely covered with weeds. Even on the banks of the Hawkesbury and Nepean, where its great fertility would seem to defy the exhausting effects of this double cropping, the land becomes covered and choaked up with wild vetches, and other rubbish, so that no crop can come to perfection; the plan then adopted is to let this lie fallow, as it is termed, that is,

to suffer it to lie untouched for several years, to be overgrown with mimosas, and to become a nursery for rank and noxious weeds of every description; in the mean time, the Settler clears another piece of fresh land, and with this proceeds as before.

The Settlers of this class have seldom any live stock, except perhaps a few pigs and poultry; no manure is therefore made upon the farm, and it is a common practice to burn the straw and corn stalks; this, I am sorry to say, I have frequently seen done upon farms where better things might be expected. The wheat sheaves at harvest time are carried to a clear place, and built into a stack; some slight covering is put over it, but as it is common to thrash it out immediately, this is not always done. The grain is thrashed out upon the ground by the side of the stack, and cleaned by the wind. I have seen a man set up a ladder to the limb of a tree, spread out a blanket underneath, and then ascending with a bag on his shoulder containing wheat in the chaff, suffer it to run gently down; the wind carries away the chaff, and leaves the grain at the bottom completely cleaned.

The system above described, such as it is, was the only husbandry known in the Colony for some years after its first establishment; many of the finest tracts were thus ruined and exhausted; and though this class of people are fast giving place to others possessed of more industry and skill, yet the mischiefs that arose from the plan of giving grants of land to men of this description, who were possessed neither of capital nor rural knowledge, are many of them irremediable. These people were generally indebted to the full amount of their crop to the shopkeepers and publicans, and when, from unfavorable seasons, or other untoward circumstances, they were unable to pay their debts, the mortgage of their farms was the inevitable consequence. These sharks, their creditors, never failed to take advantage of the first opportunity to foreclose the mortgage, and thus become possessed, for a mere song, of the

fruits of the improvident Settlers toil. Large portions of the most fertile parts of the country have thus passed into the hands of a set of men, the majority of whom came to the Colony as convicts, without a shilling of property, and who, though possessed of abundant cunning and duplicity, would never, but from the peculiar circumstances of the country in which they were placed, have emerged from that obscurity for which their breeding seemed to have destined them; many of these people, however, are now large landed proprietors and opulent men.

It was formerly the custom to give grants of from 30 to 60 acres to all convicts who had served their term without being convicted of any misdemeanour; or at least to such as could make interest to get their petitions signed by the Magistrates of their district; without making any inquiry as to the ability or means of the parties to make a proper use of the indulgence: the consequence was, that perhaps three-fourths of them never made any attempts to cultivate their lands at all, but sold the order for their grants as soon as they had received it. Others did make the attempt, but not having sufficient capital to carry them round till their farms began to afford them a subsistence, they were necessitated to obtain credit from some of the shopkeepers, who were generally publicans also; credit was usually given readily, the Settler giving his note of hand to discharge the debt in grain at harvest time; if the season was favorable, the claim was perhaps paid; and the surplus produce of the year being spent in drunkenness and riot, a new debt, to enable the Settler to go on for the next year, is contracted. Now, however, a new security is required, and a mortgage, or more frequently a warrant of attorney to enter up judgment is produced; the ignorant victim of art and duplicity, little aware of the nature of the instrument, readily affixes his signature, and then upon the first unfavorable season, his lands and property are taken by a writ of fieri facias, and sold by the Provost Marshal for probably half their value;

the creditor becomes the purchaser of the land, and the poor Settler is constrained to become his tenant, at a rent perhaps equal to half the amount of the purchase.

I shall now proceed to describe the system pursued by the better sort of Settlers—men who have either come from England with sufficient capital for their establishment, or have acquired it by patient industry and economy within the Colony: many of these were formerly convicts, and now form very respectable and industrious members of society;—reserving my observations on the various modes of improving land for a separate chapter.

Even among the Settlers of this description, a most lamentable deficiency of agricultural knowledge and rural experience is observable: many have been tradesmen in great towns, others have been officers in the navy or army, and I do not believe it is possible, at the present moment, to name ten individuals in the whole Colony who can properly be called farmers. Their former habits and prejudices are utterly at variance with their present pursuits, independent of their want of practical knowledge; and very few can be found who will lay aside the manners of the city, the camp, or the quarter deck, and betake themselves to those habits of diligence, activity, frugality, and attention to minutiæ, that are requisite to form the complete farmer.

The working cattle most usually employed are oxen. The breed of horses common in the colony is not well adapted for draught; a pair of the best horses of that kind cannot be had under £100, and, unless well kept and allowed corn, they will not be able to perform more labour than a pair of oxen. The common interest of money is £10 per cent.; a pair of horses will not be fit for active work above ten or twelve years, and will then be worth very little, so that a sum of at least £7 per annum must be laid by or provided to replace the horses when incapable of further labour, making a sum of £17 per annum for the interest of money, and to replace the capital; the ex-

pense of shoes will be near £1 a year for each horse. A pair of well-broken oxen, 4 years old, and fit for immediate work, will cost at the most £30; they will work till they are eight years old, with nothing but the grass provided for them by nature, and if allowed twelve months' run after that period, upon good grass, they will, as beef, nearly replace their first cost. I never use any other draught cattle than oxen; they plough in pairs, guided by the ploughman with reins, without a driver; they are harnessed with collars, bridles, and bits in their mouths, precisely the same as horses; I allow three oxen to each plough, changing one every day, so that each beast works two days and rests one, or four days out of seven. Their usual day's work is three quarters of an acre, except when breaking up new land, then four are used to each plough, and they perform half an acre a day. They never get any other food than the natural grass, though it would certainly be desirable to assist them with a little hay or turnips in the winter. I usually break in my young bullocks at three years old, and the first year work them in yokes at light work, such as harrowing, &c. in teams of four or six together: the next year they are put into the plough teams, and worked in collars with reins. The expense of ploughing in this manner I estimate at about 4s. per acre. Many reasons besides those here mentioned might be adduced, why the preference should be given to oxen as working cattle, in the present state of the Colony. Six oxen will not cost more than two horses; the latter will be unable to break up new land which four of the former can effect, leaving two for a change. Should any accident happen to a horse so as to render him unfit for labour, a very heavy loss will be experienced, while an ox may be fatted and will then nearly replace his first cost. In travelling the roads in the more distant and recently settled parts of the Colony, it is necessary to carry corn for horses, or they will be little able to bear the fatigues of a long journey, while oxen will be content with the grass that is generally to be found every where.

They are also best in swampy and wet places, being not so easily alarmed, and never plunging when they find themselves sinking. In breaking up new land, where roots or stones abound, oxen are infinitely superior to horses, being a more steady and temperate draught; the latter, when the plough meets with an impediment of this kind, will snatch and plunge, and most probably break some of the *tackling*, but oxen immediately stop until told to go on again.

The wheel carriages in most general use in husbandry are light carts; they are built in the Colony of a good construction and materials, complete, for about twelve or fourteen pounds; unless, however, they are very light, they should always be built to shoot, in the manner of dung carts or tumbrils, to render them useful upon the farm, as well as upon the road. Proper carts for carrying manure, stones, &c. are very rarely to be met with, owing to the little attention paid to manuring by the majority of farmers. Waggons are not much used, and those that are possessed by a few persons, are generally built on very defective principles. On farms, however, where there is much wool or grain to carry to market, a vehicle of this description is extremely useful; carrying a much larger load, and descending hills and steep places with greater facility; they are also very useful in drawing in split stuff for fencing and building, if so constructed that the back or body will take off upon occasions; temporary rough bolsters, with short stumps, may be placed on the carriage, and a large load be carried with ease and facility, which it would not be possible to lay on a cart. Some few persons use drags; they carry some kinds of commodities very well, and are easily loaded and unloaded; they are strong vehicles, not liable to upset, and carry fencing stuff better than any other two-wheeled carriage, but they do not descend hills so well as waggons, and afford the load no protection against thefts. The harrows in use are of a simple and frequently rude construction, and only used for covering seed. Large pulverising harrows, grubbers, scar-

rifiers, drills, or other more complicated agricultural machinery, are seldom seen.

The plough in general use is the swing plough; a great many iron Scotch ploughs have been imported, and answer very well; ploughs with wooden mould-boards are made in the Colony at about £3 or £3 10s. each, but they are seldom made on correct principles, and do their work badly. Perhaps the kind of plough best adapted for general purposes is that with an iron foot and mould-board, and wooden beam and handles; they are not so expensive, and are more easily repaired in case of accident. A wrought-iron share is best for breaking up new land, but after the ground has been completely cleared of roots and large stones, cast-iron shares may be used with advantage.

No system of agriculture can be said to have been as yet established in New South Wales; even on the best cultivated farms, very little has been done towards introducing a proper rotation of crops; the same destructive recurrence of wheat year after year is too generally practised, without the intervention of green crops, and with little aid from manure to recruit the fertility of the soil.

The first crop is generally wheat or maize. I have found it best to break up new land in spring, before the ground gets hard; to let it lie until the month of February or March, and then to cross-plough it, and work it well to pieces with a strong harrow; then to plough it once more, and sow it with wheat upon the furrow; in this way, the turf has sufficient time to rot before it is again disturbed; and the new land experiences the full benefit of exposure to the air and summer sun.

Maize, or Indian corn, on low and flooded lands, is much planted as a first crop; and where the soil is rank and contains much vegetable matter, its effect is very beneficial; the hand labour required in its cultivation, pulverising and exposing the soil, and fitting it for the reception of wheat as the succeeding crop. Potatoes, in the upland districts where maize

does not come to perfection, are a good first crop, and make an excellent season for wheat. For the information of new Settlers, I shall here shortly describe a plan I have practised with success in planting this root as a first crop; the method is very rough husbandry, but a new Settler must endeavour to draw some return from his labour as early as possible, and to him the hint may be useful, if adopted to a limited extent.—The best season, as above mentioned, to break up new land to be sown with wheat the succeeding autumn, are the months of September and October; this is also the season for planting potatoes as a field crop. As soon as the plough had gone two or three bouts, and a good open furrow was obtained, the plough was taken up, and a thin flag pared off as fleet as possible, and turned down into the open furrow; upon this the sets were placed; the plough was then let out, and brought round again in the same place, taking up the mould from the bottom, and turning it over the sets: in this manner the operation was continued, placing a row of potatoes in every fourth furrow; the surface immediately over the seed was afterwards broken with a hoe to cover it more effectually, and when the plants were at a proper height, they were earthed up in the same manner. If the seed is prepared before-hand, two persons may attend one plough, and will plant half an acre per day. The quantity of seed per acre is about seven cwt.; and the return with me has generally been about eight for one. This plan cannot be adopted where there are many large roots or stones in the ground, but, where it can be practised, will well repay the expense of seed and labour, though the return will be small compared to what it might be were the lands properly broken and pulverised.

I am of opinion, that when a proper system of agriculture is introduced, maize will be very little cultivated, except as a first crop, or in peculiar situations on alluvial lands; it will indeed be always useful as a saving crop on lands that from any accident have not been sown, as the season for planting is

after every other grain. The best rotation I think, on all upland situations where the soil is tolerably light, will be wheat, turnips, barley or oats, grasses, and peas. It is to be obseved, that the wheat harvest comes sufficiently early to admit of the ground being ploughed and turnips sown the same summer; these may be fed off with sheep in time to sow the barley early the ensuing spring. The grasses must be sown with the barley or oats; the grain will be ripe in December or January: and the grasses may be fed off with sheep through the remaining part of the summer and autumn; and the next year it may be cut for hay: this may be done in November, and the rouen may be pastured and folded over with sheep until the next August, which is the best season for sowing peas. In stating my conviction that this will be found the most convenient and profitable rotation for the upland and colder districts of the Colony, I must candidly confess, that the period I have been settled has not allowed me sufficient time to introduce the system fully upon my own farm; but I have adopted it as far as possible; and in one or two years more, shall have sufficient land in cultivation, to carry every part of the plan into effect: my experience, however, as far as it goes, has hitherto confirmed my opinion on the subject. The rotation of five crops here alluded to, will occupy a period of four years. Some persons will, perhaps, think it better to omit the crop of peas, and sow wheat at once upon the clover lay; but in the upland districts, where maize does not come to perfection, peas are one of the most valuable crops that can be raised, pork being an article in great demand, both for sale and domestic consumption; and unless a crop of peas is introduced, or something equivalent, the barley produced in the course here recommended will not be sufficient to fatten a proper quantity of pork; and I have found by experience, that peas make a most excellent season for wheat. The making of hams and bacon has hitherto been little attended to; indeed many persons thought the climate too hot for the purpose, but I have

ascertained that hams, of a quality equal to the best English, may be made for four or five months in the winter season; they sell readily at good prices in the Colony at present, and when they become plentiful and cheap, a market may be found in the East Indies for any quantity.

The principal impediment to the introduction of a proper rotation has been the want of a demand for barley, or, in fact, for any other grain than wheat or maize; but breweries and distilleries are now becoming numerous, and good malting samples of barley will always sell readily. Green crops were also formerly of very little value, the natural grasses being competent, even in the county of Cumberland, to fatten a sufficient supply of meat for the Sydney markets; but now by the exhaustion of the natural grass, and the great increase in the numbers of live stock, the principal flocks and herds are removed to such an immense distance in the interior, that it will be impossible to bring down fat stock, particularly in the winter season, without a very considerable loss of flesh; and every year increases the difficulty. It will therefore become necessary to fatten stock, bred in the interior, upon artificial food raised nearer the markets; and thus it will become, and I am satisfied is now, possible to grow green crops at a very considerable profit, independently of the improvement that would be thereby effected in the land, and the consequent increased amount of the grain crops. Wheat and other grains are generally sown broadcast on the furrow, and harrowed in. Very little drill husbandry has hitherto been practised, although in many instances its introduction would be highly beneficial. Wheat is sometimes ploughed in, and the plan has been attended with good success, particularly in dry seasons: I tried it myself to some extent, in the dry season of 1824, with much advantage. The roller is very little used; I do not believe there are six at this time to be found in the whole Colony; its use would, however, be attended with many benefits, especially in rolling grain crops in winter, for the purpose of closing

the ground round the roots of the plant, to protect it from the effects of the droughts of spring, and to prevent it from becoming root-fallen; I have much used the roller this way, and found it highly beneficial.

The stumps of the trees, which are suffered to remain in the ground, are a very serious impediment to good husbandry; they are perpetually in the way in every operation; it is impossible to drill crops among them; and though people do manage to plough and harrow, yet it is attended with much inconvenience, and is continually the means of breaking the implements. The immediate neighbourhood of the stumps, not being tilled, becomes the nursery for noxious weeds, and their entire removal would be attended with the most substantial benefit; at present, however, probably three-fourths, or at any rate one half, of the cultivated lands in the Colony have the stumps remaining in them.

The quantity of land that can be managed by one plough will depend upon a variety of circumstances; but where the land is properly cleared and brought into cultivation, and a suitable rotation of crops adopted, so as to distribute the labour equally throughout the year, a plough with three good oxen will probably be able to do all the work requisite upon 80 acres. It will be recollected, that the farmer is never set fast by deep snows or long frosts; and though the drought will sometimes render land in a state of nature too hard to break up, yet the seasons will very seldom prevent him from prosecuting his operations regularly throughout the year. Road work, however, is more tedious than in England, the markets being more distant, and the journeys consequently longer.

All kinds of grain are usually reaped with the sickle, the scythe being very little in use for this purpose. Moderate sized stacks, set upon steddles, clear of the ground, and barns that admit a free circulation of air, are best suited to the climate, as grain in the straw is very subject to weevil and fly-

moth, if collected in large quantities, especially if the straw, or the situation in which it is placed, be damp. It is a common fault with the Settlers to let the grain stand till dead ripe, whereby much loss from its shedding is frequently incurred.

Some few farms are furnished with threshing and cleaning machines: but in general they are not of good construction, and the most usual way is, to thresh out the grain by hand, and to winnow it with sweeps or fanners, or in a current of air:—very few use wheat screens, and to this imperfect manner of cleaning the corn, and negligence in preparing the seed, may be attributed the prevalence of drake, which is a great pest to the farmer, and materially injures the crop. Granaries of a good construction are very rare; many people are of opinion that under-ground granaries similar to those used in the South of Europe, would suit the climate best; but I believe they have not yet been tried.

The varieties of wheat in most general cultivation are the common red lammas, and the creeping wheat; there is also a variety called the Macquarie wheat, having been introduced by Governor Macquarie, and which is a native either of Syria or Egypt. The red may be sown late and ripens early; it does not tiller much upon the ground, and is subject to smut: the grain is large and heavy, and produces good flour; the quantity of seed per acre may be stated at two bushels. The creeping wheat should be sown early; it ripens after the red; it tillers very much, and does not shoot up into spindle till the summer begins to advance, when it runs up and comes into ear quicker than any other sort: the grain is plump but small, and is very little subject to smut; it makes excellent flour; the quantity of seed per acre is one bushel and a half.

The Macquarie wheat is a very hardy bearded kind; the grain is coarse and flinty. There is a kind also called the dumpey or dumpty wheat; it grows with a short and thick ear and short straw; the grain is white and not much subject to smut, but very difficult to thresh out. I can give the

average produce of the whole Colony from mere conjecture, but it does not probably exceed fifteen bushels per acre; and when the miserable system followed in cultivation is duly taken into consideration, its small amount will not appear surprising; on farms properly managed, the produce is about the same as upon lands of the same description in England. The smut in wheat so prevalent in the colony seems intirely owing to bad husbandry. The same land is sown with wheat year after year without any change of seed, and without the smallest pains bestowed in preparing the seed. I have never, but with one very small exception, sown wheat on the same land two years successively, and have always steeped my seed wheat in strong brine, and afterwards mixed a small quantity of lime with it, and I have never had any smutty wheat. Rust sometimes appears but is not very common; and wheat is sometimes blighted by the hot winds or other causes in the month of November, more especially upon alluvial lands, and other low and confined situations, where there is not sufficient circulation of air.

If the winter be open and moist, with little frost, the wheat grows very rank, and comes forward too fast; it has even been known to be injured when in bloom by the late frosts of spring; the best prevention is to keep it fed down with sheep until the end of August, especially the red wheat; the treading of the animals is highly beneficial to the crop, and prevents it becoming root-fallen in spring, while eating off the plant causes it to stool or tiller.

The maize cultivated in the Colony is of various kinds, white, yellow, and purple. It is a fine and productive grain, of a most luxuriant appearance in a growing state; in proper situations it yields an abundant return, but is a very exhausting crop, and returns very little to the ground in shape of manure, the stalks being very hard and slow of decay. The grain is an excellent and very forcing food for horses, swine, and poultry; it is also converted into a wholesome bread for man; and when malted makes good beer, but possesses less

saccharine matter than barley. It is planted in holes formed with a hoe, about three feet apart each way; at a proper stage of its growth it is hilled up with a considerable quantity of earth. The *cob* or cone of grain is enveloped with a thick coating of leaves, called its *husk;* the grains are disposed round a core in a very compact form. When ripe, the cobs are gathered in, each stalk producing one or two, and spread upon a floor to dry, and, as opportunities offer, the outward husk is stripped of; it is then spread about eighteen inches thick upon a floor; if spread too thick it is apt to heat and get mouldy; when quite dry, the grain is detached from the core by thrashing the cobs with a flail, or rubbing them with the hands; this is termed *shelling corn.*—The average produce I am hardly able to state, but on forest lands it is perhaps about 40, and on flooded lands about 80, bushels the acre. I have already given my opinion of this grain as an object of cultivation in a regular course of husbandry. It requires a great deal of hand labour, and is a most scourging crop to the soil. The other kinds of European grain are cultivated in the Colony in such small quantities at present, that very little can be said respecting them. Two kinds of barley, the English and the Cape, or skinless, are common; the latter is frequently sown for green food in winter. Oats of a very coarse kind, and also the Spanish oat, are sometimes grown, and I have found these answer better as green food than barley. Rye is sown, and its cultivation seems extending. Peas of different kinds are also raised, but not in any great quantities.—There seems no reason why all these grains may not be brought to perfection on suitable soils. Beans do not seem to suit the climate; the plant grows luxuriantly, but keeps continually flowering and dropping off, and it is seldom that any of the pods will stand and ripen. I have not been able as yet to give this crop a fair trial, but suspect that if sown early, and the tops taken off as soon as the flowers begin to appear, it might succeed very well as a field crop. In the

county of Argyle, and country westward of the Blue Mountains, the maize will not come to perfection, and it is probable that the bean, and other European grains and pulse, may attain to greater perfection there than in the lower and hotter parts of the Colony.

It is extremely difficult to obtain a true sample of seed of any description. The system of husbandry has been so slovenly, and corn crops have been grown in succession, without any intervening green crop to clean the land, that all the different varieties are jumbled together in the strangest manner. The consequence is exceedingly prejudicial to the crop, as where two or three kinds of wheat are grown in the same field, one sort will probably ripen a week or more before the others, and consequently will be shed and wasted, and become the prey of quails and parrots. The Agricultural Society have lately imported some samples of wheat, barley, Poland and potatoe oats, tares, and buck-wheat, and it may be fairly anticipated, that from them some prime sorts will be obtained. The most important point in good husbandry, change of seed, has been greatly neglected, and to this omission may be reasonably attributed the present inferior quality of the barley grown in the Colony; no other grain requiring such frequent and careful changes of seed as this, to prevent it from degenerating. It is true, the greater part of the county of Cumberland is unsuitable for the growth of barley, the soil being a stiff clay. But still there are many tracts in that county of fine barley land; and in the more elevated districts, the soil is well calculated to produce that grain.

No attempts have yet been made towards feeding or fattening live stock upon artificial food, except very partially with regard to sheep; nor has any system of farm-yard management, with a view to the production and preservation of manures, been adopted. The stable, pig-sties, and calf-pens, are the only places about the farm-yard where manure is collected: and as these are seldom half littered, the quantity

made is very small; indeed the whole obtained upon many large farms is frequently expended upon the gardens, which in general are much too large, and only rob the rest of the farm. No value seems to be set upon straw; it is a very common practice to burn it, and when this is not done, very little care is taken to use it with economy and benefit. In the winter of 1824 I kept my milch cows shut up in the yard at night, and fed them upon hay, mixed with oat barley and pea straw; they throve much better than they would have done upon the withered natural grass in that severe season, and the yard being kept well littered with wheat straw, a large quantity of dung was obtained; the calves also had wheat straw given them in racks in their pen, and they consumed a large truss every night.

The green crops hitherto raised have been chiefly devoted to feeding swine, except some small portion that has been appropriated to milch cows; green barley and oats are also used as winter food for horses. Every variety of turnips is known in the Colony, and, where properly cultivated, on suitable soil, they have been found to thrive very well. I have tried them to some extent, and obtained good ones. In 1824 they failed through the extreme drought of the season; it is probable they would have succeeded better had they been drilled; but I was not in possession of proper machinery, and could not obtain it in the Colony. Rape has been cultivated as food for sheep with success. Tares, I believe, have never been tried, although as spring food they would be extremely valuable. Potatoes are grown to some extent, but are principally intended for market; in the lower districts the soil is too stiff for this root, and the quality is inferior, except in a few places on brush lands, and on light sandy tracts, near the banks of creeks or rivers; but in the more elevated parts, the quality is good, and the return abundant. They are a good first crop upon new land, but will be inconvenient in any regular rotation, and are attended with much manual labour It is proba-

ble the cultivation of potatoes will never be much attended to as a field crop. Cabbages, I believe, have never been attempted except in gardens, though the clay lands of the Colony are well adapted for their production.

Tobacco may now be said to be fairly introduced as an object of cultivation, and it may be reasonably anticipated, that in a few years the export of this article will be an object of importance. Very few persons are, however, as yet, in possession of proper sheds and conveniences for drying and curing it. The produce, when well managed, has been of excellent quality. As the culture of this plant is likely to extend very considerably throughout the Colony, I shall here insert Mr. BRADLEY'S method, as communicated by him to the Agricultural Society, and for which he was voted a piece of plate by that body.

"In the cultivation of tobacco, raising the plants is not the least difficult operation to persons unacquainted with it. Having marked the ground where I mean to raise my plants, it is covered with small brushwood, and this is burnt to kill any seeds or roots that may be in it, and it also helps the growth of the plants when the ground is cold. It must be raked very fine, and the seed then sown, but not covered with the rake: it may be pressed a little with the back of the spade. A hurdle, or something of that kind, must be laid over it, but so as not to touch the ground, and this is to be covered thinly with straw, only enough to prevent the rays of the sun from penetrating. It may be watered through the straw, which must be done once a day, and in very dry weather twice; as the surface should never be dry from the time the seed is sown until it is well up; then in wet or dull weather the hurdle and straw may be taken away, but the plants still nourished with water in dry weather.

"The seed may be sown in August; it will be up in three weeks, and some of the plants may be transplanted in the latter end of October, and the transplanting may continue, when the weather permits, until the middle of January. Forest land, to receive the plants should be well manured and worked fine. The plants should be four feet between the lines; but, if the land is not very rich, they may

be planted much nearer. The planting should be done in wet weather, or while the ground is moist; even if it should rain, no time should be lost. If a shower falls in the night and the morning looks like a dry day, plants may be put out, but they must be covered with a chip or a piece of bark, nor must they be uncovered for five or six days, unless it rains. Some seasons I have been obliged to cover nearly all my plants, and other seasons I have not covered any.

"After planting, the first enemy is a black grub, which will destroy many plants. It lies in the ground, and there is no finding it until the mischief is done, when it will be found at the root of the plants; it must be looked for and killed to prevent the loss of more plants: they are perceptible at first, but in two or three days they grow to a large size, and will do much damage. These must be diligently looked for and destroyed; they are the worst in the beginning of the season, when the plants have not a strong root.

"If the season has been wet, the ground will be hard and baked in dry weather; the soil therefore should be loosened, and the plants will be much stronger. The employment now is to keep clear of insects and weeds until the plants are lopt. In doing this, I let the plants grow until the form of the blossom is just to be seen; I then take off from the bottom the decayed leaves, and such as have been injured by the insects. I then take off the top, leaving what the stalk will bear, generally from 12 to 16 leaves. The work will now be to keep down the suckers until it is ripe, which state may be known by the curly and yellow mottled appearance of the leaves. It is then to be cut in dry weather and left on the ground, but only until it is softened, which is to prevent its breaking in removing to the shed. If it lies too long in the sun it will have a bad colour. Two men with a hand-barrow will carry it in the safest manner to the shed. It is then hung up, every stalk separate and clear of the other. Sheds for drying tobacco should be as airy as possible, and in wet weather assisted with fire; perhaps charcoal would be the best. I used wood, and found no inconvenience from it as to the quality of the tobacco. In this state it hangs till it is perfectly dry. It should be taken down in wet or moist weather, and the leaves stripped from the stalk, and if the tobacco is not good then, I think it never will be so.

" The greatest danger of spoiling tobacco arises from the want of proper sheds to dry it in. If it gets mouldy, I am of opinion that it can never be made good; but as for sweating, I think the higher it is in that state, the nearer rotten. I take great pains when I have a heap of leaf tobacco by me to keep it as cool as possible, by very frequently turning it, until it can be manufactured into negro-head. This is best done in wet weather; but, if the leaves are dry, they are to be sprinkled with water, and laid in a heap, until it has the dampness desired, which is just such that it can be worked without breaking the leaves. The stem of the leaf is then taken out, and the leaves twisted up in the size and form desired. It is then placed in a cask put under the press; it is in the press the tobacco gains its fine colour and smell.

" My press is as simple as any part of the process, being only a strong post placed in the ground with two mortices cut in it: one to admit the lever, the other to admit a strong piece of timber level with the ground for the cask to stand, so that one works against the other, and keeps the post steady: two men with block tackling can work it with ease.

" One acre of tobacco will require the constant labour of one man, until it is fit to cut."

Flax has been cultivated with success; the produce is of good quality, and the crop abundant. It would probably be a profitable crop for the purpose of exportation, especially on the alluvial lands, where its exhausting nature would do little injury. Its production is at present limited to the demand for the Factory at Parramatta, and other domestic purposes. The New Zealand flax has been introduced and thrives well, but has never been tried as a crop.

Hops are grown by the colonial brewers, and seem to answer well; but the demand being limited, the cultivation is not likely to extend.

Nearly all the English grasses, clovers, &c. have been introduced, and some of the principal Settlers have sown considerable quantities; but in general the process of laying down the land to grass has been very ill executed. Lands that had

been exhausted by a repetition of corn crops, and were full of seed weeds, have been sown with grasses, without being properly cleansed, and the consequence has been, that the grasses have soon been overpowered and destroyed by the weeds. In many cases, the species sown were not adapted for permanent pastures, such as red clover and cow grass, and of course decayed in two or three years. No idea of introducing grasses, as part of a rotation of crops, seems to have been entertained by any one; the sole object was to obtain permanent pasture; but no suitable selection of kinds, adapted to the soil and situation, was thought of, people generally sowing the seeds of such as they could obtain, without reference to their individual qualities, or endeavouring to obtain a due proportion of each kind. Enough, however, has been done to ascertain that the whole of the European grasses will thrive in the Colony, and stand the winter. White clover is spreading every where through the country, but it withers and almost disappears with the summer's drought. The other kinds resist the heat very well. Lucerne has been tried with great success; red clover flourishes amazingly, but is said not to perfect its seed. The principal use that has been made of artificial grasses has been as pasture for sheep, and to supply the town of Sydney and the shipping with hay. This article is now sold, delivered in Sydney, at about £9 or £10 per ton.

Much difficulty is experienced in this, as in every other department of agriculture, in procuring good seed; and every person who intends laying down any considerable quantity of land to grass, will find it necessary to cultivate the different sorts in beds, or patches, and to collect the seeds as they ripen.

From what has been stated, it will be seen that the agriculture of the Colony is in a very rude and infant state, and will require many years, and much fostering aid from the Local Government, to bring it to any degree of perfection. Many circumstances have hitherto contributed to retard its progress

towards improvement; the principal of which has been the want of capital and skill in the majority of the Settlers; this defect nothing but time, and due encouragement held out to induce respectable men of capital to emigrate, can remedy. The difficulty of obtaining good farming servants, and especially good ploughmen, has always been a serious impediment, and still continues so; but were the masters generally possessed of more practical knowledge, it would be of less importance, since many well-disposed men may be found among the convicts who might be taught to plough, and perform other operations, had the masters sufficient skill for the purpose.—The want of mechanics is an evil not so easily remedied as the last; the Government formerly retained the whole of the convict-mechanics that arrived, for the purpose of constructing magnificent public works, while the majority of the Settlers were destitute of decent habitations, and convenient buildings for their business; and none but very particular favourites could ever obtain the assignment of a mechanic. A somewhat more liberal distribution is now practised, but a charge of 3*s.* 6*d.* per week is imposed for each mechanic assigned: this is certainly a very great hardship, since a man that maintains 15 or 20 convicts in constant labour, free of every expence to the crown, ought at least to be allowed the services of a mechanic, free of any charge of this kind. Among the convicts in every ship that arrives, there are always a considerable number of lads, who have served part of an apprenticeship to various trades; by completing these in their respective trades in the Government service, a very considerable number of useful mechanics might be obtained; this plan might also be extended to the instruction of a number of the young London thieves and pickpockets, and other convict boys, in useful arts; they are utterly useless upon a farm in their present state, but many of them might be rendered useful members of society, if instructed in this manner. This plan is indeed acted upon by the Government to a certain extent, but seems

capable of being rendered much more beneficial. Sawyers are a description of people very much wanted in the Colony; there are in every ship a considerable number of able-bodied men, that have been soldiers, sailors, &c.; these are of no use to a farmer, but if instructed in the very simple art of sawing, and subsequently assigned to individuals, would be highly useful. The want of buildings and proper conveniences is the greatest impediment in the way of the cultivation of tobacco, and many other articles.

The irregularity and uncertainty of the markets have hitherto much retarded the improvement of agriculture. The price of every article of produce fluctuates extremely; and although this may sometimes be an advantage to the few possessed of means of hoarding in time of plenty, against the return of scarcity, yet it is an evil to the greater part of the community. Formerly, when a plentiful season occurred, the markets were completely glutted; and no vent being found for the surplus produce, the price generally sunk very low; the natural result was, that a much less quantity of grain was sown, and this produced a short supply, and consequent high prices, and cultivation again extended. Thus alternate plenty and scarcity have existed from the first settlement of the Colony. The colonial distilleries, breweries, and exportation to the Isle of France, and other places, now provide a market for some part of the surplus produce, and these sources of demand are continually increasing. In former times, the demands of the Local Government, for the supply of the military and convicts, was the only market open to the Settlers; and Government still continues the principal purchaser. The measures and operations of the Government have therefore a very great influence upon the markets; a very remarkable instance of this has occurred within the last year, and as it has given rise to events of a very extraordinary nature, I shall here insert a few remarks on the causes that have led to the late fluctuations in the price of wheat in the Colony.

Previous to November, 1822, the plan adopted in receiving wheat from the Settlers was as follows: The Commissary, by advertisement, required each person to tender the quantity he was able to supply; when all the tenders were delivered in, a certain proportion was appointed to be received from each, never exceeding 100 bushels. This quantity was invariably paid for at 10*s.* per bushel, without any reference to the existing market price.

The harvest of 1822 was a full average crop, and the market price having declined below the fixed Government price, the Local Government thought a fit opportunity had arrived to abolish the system of receiving wheat at a fixed price, and determined for the future to receive wheat by tender, at the lowest price that might be offered; this determination was announced on the 27th November, 1822.

From this time until the harvest of 1823 the price of wheat continued gradually to decline; the harvest of that year was very abundant, and in the month of February, 1824, the market average had fallen as low as 4*s.* 0½*d.* per bushel; the Government might now have been supplied with a full year's consumption; but by going into the market and purchasing thus largely, the price must have been considerably enhanced; they therefore determined to receive no more than their present wants required, vainly imagining that by such means they could keep down the price of wheat for the whole year. No doubt, however, can be entertained, but that by purchasing with due discretion, at proper intervals, the whole year's supply might have been obtained under 7*s.* per bushel.

Three-fourths (perhaps even a greater proportion) of the people who raise wheat for sale in New South Wales, are individuals who have been either soldiers or convicts; men of thoughtless, improvident habits, and consequently in indigent circumstances; these men have no barns or granaries for housing and preserving grain; their crop, when obtained, must immediately be thrashed out and carried to market, or very

great loss and damage will unavoidably ensue; moreover, the greater part of them are commonly indebted to the shopkeepers and merchants of Sydney, and the other towns, and look to the sale of their wheat as their principal future means of payment. On the present occasion, finding the Government stores, to which they had hitherto been accustomed to look for their principal market, shut against them, through the backwardness of the Local Government to purchase, they were compelled to part with their crops to the persons with whom they stood indebted, at very low prices; the main bulk of the year's crop thus got into the hands of a few individuals, a circumstance which could not fail greatly to enhance the price, as will be seen in the sequel.

In seasons when wheat sells at good prices, the greater part of the poorer class of Settlers, especially the Irish, with their servants, consume very little, but subsist upon maize and potatoes. The year in question, (1824,) these people, finding no sale for their wheat, used it themselves; many thousand bushels were also consumed in feeding swine, to which I was an eye witness, and, indeed, I used a considerable quantity that way myself. All these circumstances acting together, which could not, or at least ought not to have been unknown to the Local Government, contributed to expend the crop of wheat in a very wasteful and improvident manner; which was further aided by the crop of maize being very short in consequence of a dry summer, and thereby occasioning still greater calls upon the stock of wheat, so that by the middle of July, the supply had considerably diminished, and the market average had consequently advanced to 7*s.* 11½*d.* per bushel; many discerning persons, who were possessed of good information, now began to see that a scarcity must take place before the next harvest, and therefore immediately commenced purchasing; but, as already observed, the bulk of the crop had got into the hands of a few merchants and shopkeepers; and the price consequently advanced so rapidly, that in the month

of September, the market average had reached 13*s*. 6¾*d*. per bushel.

Strange as it may seem, it is nevertheless true, that the Local Government never discovered their error until the alarm of a scarcity had spread; and I am credibly informed, delayed making any purchase till there was at one period only six days' rations of flour in the magazines; in this emergency, they were compelled to purchase at extravagant prices, and dearly paid for their ill-judged parsimony and want of liberality in the beginning of the season. It was now resolved, just at the approach of harvest, to send to Batavia for flour, and the ship Almorah was accordingly engaged for that purpose; she sailed on 10th September. New wheat was sold in Sydney market on November 18th; and the harvest became general in that month throughout all the principal corn districts. The importing this cargo could not therefore relieve the existing scarcity, and could only serve to introduce a quantity of foreign produce into the Colony, to the prejudice of the home-grower. The ship on her retnrn to Sydney, was, however, seized by His Majesty's ship Slaney, for a breach of the East India Company's Charter, and sent to Calcutta to be tried: her cargo, consisting of rice and wheat, procured at high prices, and attended with very heavy expences, was thus accidentally prevented from coming into consumption in the Colony. The consequences of the wretched policy of the Local Government at the commencement of the year 1824, did not end here; the long continuance of very low prices produced a belief, which was very prevalent among the poor and ignorant Settlers, that wheat would never again be worth 5*s*. per bushel; this persuasion was at that time industriously encouraged by the crafty dealers and shopkeepers, for the purpose of inducing the Settlers the more readily to part with their grain then on hand at low prices. The lower order of Settlers are, however, the principal suppliers of the markets

with grain, the wealthy graziers very seldom growing sufficient for their own consumption; and the consequence of this opinion, so firmly believed by the greater part, was, that at the wheat seed time in the months of April and May, 1824, probably not above two-thirds of the land intended for wheat was sown. The harvest, from the drought of the season, also proved a very bad one, and the average price of wheat, which at the time of the arrival of the Almorah, immediately after the harvest of 1824, was at 7*s*. 1½*d*. per bushel, again rapidly advanced, and when the last accounts left the Colony in July, 1825, was at 13*s*. 1*d*. per bushel; these high prices will cause the cultivation of wheat to be again extended; and two years more, with average seasons, will again bring about a plentiful supply, and a recurrence of low prices.

The system of receiving wheat at a fixed price, which in the early days of the Colony might have been a measure of good policy, had no doubt become injurious to the interests of the Settlers themselves, and its abolition was therefore a wise measure. The Colonists, habituated to expect 10*s*. per bushel for their wheat, never gave themselves the trouble to attempt the production of many articles suitable to their soil and climate, and this maximum price may be assigned as a principal reason why the Colony has yet produced so few articles for exportation. But the manner of carrying the measure into execution, and the subsequent measures pursued, were injudicious, and produced the evils above described.

The horticulture of the colony has, by a few intelligent gentlemen, been carried to a much greater degree of perfection than its agriculture; but on this head, my personal experience will not allow me to say much: and perhaps in a work of the limited nature of the present, it is unnecessary to go into a detailed account. My observations on this point will therefore be as condensed as possible, in hopes that some gentleman better qualified for the task, of whom there are several in the Colony,

will favour the public with the results of his experience in Australian horticulture; a work of that description would confer a great benefit on the Colony.

The esculent and culinary vegetables and roots of Europe are all grown in great perfection, together with many others that cannot be raised in England without the aid of artificial heat. Fruits are in great abundance and variety, and many of excellent quality; the principal are oranges, lemons, citrons, peaches, nectarines, apricots, figs, grapes, olives, loquats, grenadillas, pears, apples, plums, cherries, quinces, mulberries, raspberries, strawberries, and pomegranates, the whole of which arrive at great perfection, especially such of them as are natives of the south of Europe; the trees are invariably grown as standards. Peaches are more abundant than any other fruit; considerable quantities of cider are made from the juice; and swine are fed with them by many people, for three or four months in the summer and autumn. The banana and guava are grown, but the climate is not sufficiently hot to bring them to perfection. Pine apples require the protection of a frame. The climate seems too hot for currants and gooseberries; but the Cape gooseberry is a good substitute for the latter. Melons grow every where, and arrive at perfection in the open air. Of the nut kind, are the almond, walnut, chesnut, and filbert; all which do extremely well. The planting of almonds is now much attended to; and it may be expected a considerable quantity will be furnished for exportation in a few years. Several gentlemen have lately turned their attention to the vine and olive with much success; some good wine and excellent raisins have been made; and these valuable productions at length bid fair to be of essential service to the Colony. The cultivation of these articles, however, is attended with much expence, and can only be undertaken by persons who have been settled some time, and have a considerable command of labour.

New Settlers will find it to their advantage to confine their

operations in gardening to the production of a few of the most useful vegetables, and the propagation of fruit trees; after two or three years, when their farm begins to be fully productive and support itself, the labour of three men will be of less importance, and their maintenance of less expense, than one would be in the first commencement; they may then appropriate one man to the management of the garden, and raise a variety of articles which will contribute greatly to their comfort and convenience: no garden can be properly attended to, unless at least one man is kept constantly employed in it; there are always a number of little jobs and trifling operations to perform, which, however, are important to the raising the different productions in a proper manner; and to execute these it will never answer to take off the farming labourers from their other and more important work; any premature attempts therefore at elegance or perfection in gardening, will either prove abortive, or entail on the Settler an useless and ruinous expense. The whole strength upon every new farm should be directed to the most useful objects, such as the clearing and enclosing land for grain crops, and erecting the most necessary buildings; ornament and elegance must for a time at least be kept out of sight; the obtaining plenty of provisions must be the grand and only object; upon the early accomplishment of this important point, the Settler must rest his hopes of success; when that object is once attained, everything will go on smoothly; the labourer will feed the shepherd and mechanic—the shepherd will clothe the mechanic and labourer—and the mechanic will house the labourer and shepherd.

The propagation and planting of fruit trees must not, however, be neglected, especially of the more useful kinds, such as apples and peaches; this very important point in rural economy, is not sufficiently attended to by the majority of Settlers. The want of some kind of cheap and common beverage is much felt. Private brewing is very little practised; and apple or peach cider would be most important and useful articles in harvest and other busy seasons.

The horticulture of the Colony has been much improved by the establishment of the Government Botanical Garden at Sydney, under the superintendence of Mr. Charles Fraser, the Colonial Botanist; whose indefatigable exertions in introducing and propagating new fruits and other productions, and liberality in distributing them among those persons likely to take care of them, are deserving of the highest praise.

# CHAPTER IV.

## BREEDING AND MANAGEMENT OF LIVE STOCK—HORSES HORNED CATTLE—SHEEP—SWINE—FAIRS AND MARKETS.

THE facilities afforded by the goodness and abundance of t natural grasses, and the steady, though gradually declinin price of meat, have contributed to advance the grazing a breeding of live stock in the Colony, especially in the han of a few intelligent individuals, to a much greater degree improvement than its agriculture; the system pursued b many of the stock-owners is still, however, very rude and ir perfect.

The bulk of the horses are derived from animals import from the Cape of Good Hope, and from India; they are of very mixed description, having, for the most part, been br without care, the high price naturally tempting the owners put every mare to the horse, however deficient in the requisi qualities for a good brood mare; and the high sum demand for the service of the best horses obliging the poorer breede to content themselves with such horses as they could send the mares to at a cheap rate. There is, properly speaking, r breed of good draught horses in the Colony; a great many, is true, are used for drawing carts, and also in ploughin but they are deficient in bone, weight, and strength, and se dom of good bottom. The majority of the horses may be d scribed of the nag kind; they are of various colours, and n very sightly in appearance, being narrow and sharp-backe

fall off much from the rump to the tail, low-necked, and large-headed. They are very apt to shy at objects upon the road, and are not very sure-footed, which, perhaps, may be owing to the unskilful way in which they are generally broke in; they are, however, subject to few diseases, and capable of enduring great fatigue, and will perform long journeys on indifferent keep much better than any horses in England. There is a breed of small galloways, derived from crosses with the Acheen breed of ponies; they are very hardy and serviceable, and some of them handsome. Within the last few years some very good thorough-bred blood horses have been introduced from India and England; one of the best of these was Mr. Browne's Arabian horse, *Model*, from Calcutta: the best cross-bred horses, now in the Colony, are derived from this very fine specimen of the Oriental breed. A cross-bred horse of his getting has been sold for 200 guineas, for exportation to India. This horse covers at twenty dollars each mare: ten guineas are demanded for the service of the thorough-bred blood horses lately imported from England—and it is said the horses are sufficiently employed even at that high price; there are horses, however, that cover as low as ten and eight dollars each mare. Some stallions and mares of the English and Flemish cart breeds have been lately introduced; the thorough-bred horses of this description are certainly too heavy for the climate, but it is probable that, by judicious crossing with the lighter kinds, a breed may be obtained with sufficient bone and strength, but yet not too heavy for the purposes of draught in this climate. I have already given my opinion as to the superiority of oxen as working cattle in the present state of the Colony; but it is probable that, as the country becomes more extensively cultivated, and the roads are improved, horses will come more into use, from their greater activity and superior fitness for road-work.

The prices of horses are extremely various, but upon the whole very high; three-year old colts will fetch, according to their qualities, all prices, from 20 to 200*l.*; the price, however, of good horses for the saddle, or to run in harness, may be stated from 40 to 60*l.*; the best draft horses are nearly as dear: fillies and mares may be stated at 15 or 20 per cent. above colts and horses of the same quality, being much sought after for the purpose of breeding.

Breeding horses is a very profitable occupation of capital, but cannot be attempted by any new Settler with a prospect of full success, until he has a sufficient number of enclosures formed to class and divide his stock in a proper manner; the breeding mares, entire colts, geldings, and fillies should all be kept separate, in secure enclosures, otherwise the fillies will take the horse, and the colts will cover, at too early an age, which will greatly check and impede their growth. The colts also drive the geldings about, and frequently do them serious injury. It is the practice with many breeders to allow the horse to run with the mares in the covering season, which is certainly attended with many advantages, as the mares then never take the horse unless when nature prompts them, and it is very rare they miss breeding. Others keep their horses stabled, and bring the mares to them at regular intervals of nine days, until they refuse the horse; but in this way they very often miss breeding. Every person who breeds horses to any extent, should endeavour to keep an entire horse of his own, otherwise the expense of hiring the service of a horse will run away with a good part of his profits. Those, however, who have any very valuable mares, will do well to send them to the best horse they can, without regarding the expense. The climate seems peculiarly congenial to the breeding and improvement of horses; they are subject to few diseases, and the mares, if well kept, breed very regularly to an advanced age. Horses kept in towns are principally fed upon maize and bran; they are seldom allowed hay, which is dear, and

not always to be obtained; but in lieu thereof the coarse grass, produced in the neighbouring woods, which is brought into Sydney by people who make a living by procuring it; this is, however, a very poor food, and a wretched substitute for hay, especially in the winter. In the interior, horses are generally kept in enclosures, and fed upon the natural grass; those, however, that do much work, are allowed corn, either maize or oats, and are also frequently supplied with green oats or barley in the winter; but this is a poor washy food, and a bad substitute for good hay, for horses that work hard.

The horned cattle of the Colony are derived from various countries, England, the Cape of Good Hope, India, and other places; they have been bred with little discrimination, and are of a very mixed and mongrel description. Some few breeders, however, have paid more attention, and possess very good herds, though probably not in all cases of the kinds best adapted to the country: Mr. John Macarthur's are of the Lancashire, and the Rev. Mr. Marsden's of the Suffolk or polled breed; these two are perhaps the purest and most unmixed of any herds in the Colony. Mr. Throsby possesses a large and strong variety, and the heaviest oxen yet produced have been from his herds. A very large proportion of the horned cattle of the Colony are derived from the Bengal breed; these may be easily recognised from their affinity to the buffalo; they are remarkable for large hunches on their shoulders, and a thick skin, covered with smooth shining hair. They are small, and of little or no use for the dairy, but fatten readily upon inferior keep, and make very strong and hardy working stock; the quality of their beef is very fine. It is now hardly possible to trace the other varieties of cattle that have been at different times introduced into the Colony, nor will it answer any useful purpose to do so; the better way for every new Settler in purchasing his stock, will be to view the herds of the different breeders, and then well consider the quality of the land and pasture he will have to put them upon, and make his

selection accordingly. The pure English breeds, especially of the larger kinds, I am fully persuaded are too good for the Colony in its present state, and cannot be supported and brought to perfection upon the natural grass, except in very peculiar situations, and where they have a wide tract of country to range over. The smaller breeds of British cattle, such as the North Devon, South Wales, and Galloway Scots, would all answer extremely well, and produce more beef and more milk than the Hereford, Sussex, or large Yorkshire breeds; but perhaps some animals of these latter kinds, especially the Yorkshire, would be very desirable for the purpose of crossing the present race of colonial cattle, the majority of which may be described as large boned, thick skinned, large head and horns, coarse neck, heavy fore-quarters, deficient hind-quarters, and very bad milking stock; the short-horned Yorkshire are the reverse of all this: by judicious crossing with these, a breed might perhaps be obtained, with a lighter fore-quarter, more meat upon the best joints, and better adapted for dairy purposes, at the same time not too tender, or requiring better keep than the country, in its natural state, is able to supply. My own opinion is, that a variety derived from the moderate-sized English breeds, slightly touched with the oriental kind, is, under all the circumstances, best adapted to the present state of the Colony.

Very few of the stock owners have sufficient land to support the whole of their stock, and are therefore obliged to have recourse to the unoccupied tracts in the interior. When any person finds himself overstocked—and very few make the discovery, or, at any rate, will take measures to remedy the evil, until their cattle are half starved—they go into the interior, or *bush*, as it is termed, beyond the occupied parts of the country, usually procuring the assistance of some of the black Natives, as their guides. Having found a place suited to their purpose, with abundance of grass, well supplied with water, and, if possible, with natural boundaries, such as thick brushes,

rocky creeks, or impassable mountains, they then make application to the Local Government for permission to occupy the same, describing its situation, boundaries, and the name by which it is known among the Natives; this permission, or *ticket of occupation*, as it is termed, is always granted upon paying a trifling fee; and conveys to the stock-owner a right to occupy a tract usually extending two miles in every direction from his stock-yard; always, however, holding himself in readiness to quit at six months' notice from the Surveyor-General, should the land be wanted for the purpose of colonization; and also prohibited from cutting down or removing any timber, except what may be required for stock-yards or huts. This ticket of occupation system has been of material advantage to the stock-owners, by giving them the free use of the natural pasturage at a cheap rate; but it has also been attended with many disadvantages. The occupation of the country, by new Settlers, has of late years been so rapid, that the graziers have found themselves continually impelled further on into the interior; and thus their flocks and herds have become every year removed to a still greater distance from home; the necessity of their occasional personal superintendence imposes upon them the obligation of undertaking long and toilsome journies, with all the disagreeable consequences of absence from their principal concerns, and privation of domestic comforts. The expense, also, of sending the necessary supplies to their shepherds and stockmen, at such a long distance, becomes a very serious matter; while the uncertain tenure, on which they hold the land, hinders them from inclosing and cultivating as much as would subsist their people; and at length when they are compelled to remove, to make way for new Settlers, the latter find the pasturage ruined and exhausted. The Government have lately, however, come to a resolution, to sell lands on very reasonable terms; the large stock-owners will therefore be able to purchase as much as they may, or at least ought, to require, for their own use; and they will pro-

bably see the necessity and advantage of keeping down their flocks and herds to the number their own lands will be able to support, and not spread their establishments all over the country, as some of them seem disposed to do at present.

In taking possession of a tract of land, or grazing *run*, as it is termed in the Colony, the first thing to be done, is to erect a secure five-railed stock-yard, with strong posts, sufficiently capacious to contain the whole herd, with proper divisions for drafting off any portion, should it be required, for market or any other purpose; and a small pen for young calves. A bark hut is also erected, for the residence of the stockmen. The cattle are then brought to the place, and for the first few days herded together, and enclosed in the stock-yard at night; when they seem pretty well reconciled to the place, they are left or *bedded* out one night, and *yarded* the next; then yarded twice a week, afterwards once a week, till at length they are left out altogether. Some people make a regular practice of having their herds brought in at regular intervals, and it is certainly very advisable, as it keeps them more under subjection, and prevents their getting so excessively wild, as is the case with many others, who allow their stock to remain out many times for months together, without being brought into the yard. Cattle once accustomed to a run in this kind of way seldom or never stray from it, during the time the pasturage affords them sufficient food. Unless frequently yarded, however, they get very wild and shy, and will rarely allow a man on foot to get near them, but may always be approached on horseback. Of course, cattle kept in this way cannot be bred with much care or discrimination; the bulls are allowed always to remain in the herd; the heifers take the bull at a very early age, and frequently produce calves at sixteen or eighteen months old; the male calves, not intended to be kept for bulls, are castrated at from two to six months old, but are frequently allowed to run much longer, and injure themselves greatly by beating about after the cows and heifers when bull-

ing. If a person goes to the expense of procuring the best bred bulls he can obtain, he is very liable to be annoyed, and materially injured by inferior animals belonging to other persons who may have herds in his neighbourhood. The cows also are dropping their calves the whole year round, and many in severe seasons have great difficulty in rearing their calves; very few are ever milked, except, perhaps, two or three for the use of the stockmen, and sometimes when the cows happen to be flush of milk, and have more than the calf can take, the loss of part of their udder is the consequence. In some few instances, the calves are shut up and suckled twice a day for a short time, but in most cases they run with their mothers from the moment of their birth, and frequently are not weaned till a very advanced age; some people, however, do take the trouble of attaching a small board to the cartilage of the nose, to prevent their sucking, at about seven months old. The only thing that can be said in defence of this system of breeding cattle, is, that it is perhaps the best that could be adopted in an open uninclosed country, where the cattle have increased faster than it was possible to make inclosures for them. Some few persons, who have very large herds, have so far improved upon this plan, as to divide their cattle into three portions, keeping their breeding herd at one place, their bullocks at another, and their heifers at a third; this division, when it can be effected, is very desirable, as the bullocks feed more quietly, and fatten better, when left to themselves; but it is very difficult to find a place for the heifers so secluded, that bulls cannot get access to them; and in this case, as the strange bulls may be of an inferior description, the remedy is worse than the evil. The expense attending a herd of cattle is very small; two men being sufficient for the care of five or six hundred, and, unless the distance is very great, two or three journeys in the year will be sufficient to convey the supplies of provision and necessaries requisite for the herdsmen; these men, at least the principal ones, are generally free men, hired at about £25 per

annum, besides their ration of meat and flour; they are usually allowed the use of a horse, keep a number of greyhounds, and pass the greater part of their time in hunting the kangaroo, emu, and native dog, and make a considerable profit of their skins. Of course their cattle are frequently much neglected, and suffered to wander about at will, over a wide extent of country: and the herdsmen very often do not see the whole of them for months together. Many of these people are much attached to their way of life, which, though secluded and lonely, affords them full opportunity of gratifying their vagrant and idle habits, and that passion for the pleasures of the chace so common to human nature. Hunting and smoking tobacco are the principal occupations of a stockman's life.

No doubt can be entertained that cattle kept in inclosures, managed under a proper system, and put to the bulls at such a period that they should all drop their calves in the spring of the year, would be more profitable than double the number suffered to range at large in the manner above described; especial care must, however, be taken, that the pastures are not overstocked, as in this Colony the graziers have no artificial resources to fly to for assistance in scarce seasons. The cattle kept about the residences of the Settlers, are managed more or less after the above plan, according to the state of improvement their farms have arrived at, and the progress that has been made in inclosing them. Some persons cause their stock to be followed by the stockman through the day, and shut them up in yards at night; but this plan, unless the result of necessity, is a very bad one, the cattle, especially during summer, feeding to most advantage in the night, when the dew is on the grass. Others follow them through the day, and shut them in paddocks or large inclosures at night; this is a much better plan, allowing them the liberty of feeding in the night, and securing them from straying. Others again have got their lands completely enclosed, and divided in such a manner as to be able to shift their stock properly upon it;

these persons can improve and breed their cattle securely, provided they take care to understock their land; but the reverse is too often the case, many stocking their pastures to the extent of what they will bear in plentiful seasons; and the consequence is, that in scarce times they are short of food, and frequently perish from want, or perhaps have to be driven away into the interior, in a weak and exhausted state, when numbers die upon the road; and those which do survive, even under the most favourable circumstances, are a long time before they recover their flesh and strength. Every person ought to regulate his quantity of stock by the number his land will support in the worst seasons; he would then always have plenty, and escape the deplorable consequences attendant upon overstocking. This again brings me to urge upon every man the necessity, as soon as he is able, of making hay, or providing some other resource against adverse seasons. Plentiful times frequently occur, when the land will bear, for many months, or even two or three years together, five times as much stock as it will at others: unless at these times, therefore, sufficient stock is kept to consume the grass, a great deal of feed will be wasted, and the pastures much injured; but then, unless the farmer provides artificial means, he will have no resource against the return of scarcity; his only safe plan, therefore, is to keep his land constantly understocked. Making hay in this climate is attended with very little labour; I have cut grass in the morning and carried it at night; and have rarely had occasion to let it remain abroad above twenty-four hours; indeed very great care is necessary not to overmake it. I have generally found it sufficient to tedd it from the swath, rake it into winrows, turn two of these together, and carry it immediately.

The prices of horned cattle are extremely various, according to their qualities; but have been gradually declining for several years; in fact, from their first introduction. Good dairy cows are still in great demand; I have known £100 lately offered for the choice of five out of a herd of about forty, and refused.

About £12 or £14 may be stated as their average value; good two-year-old heifers in calf may be had at about £8 each; four-year-old bullocks, fit for the butcher, and weighing 700 lbs. each, will fetch about 10 guineas or £11. Cattle are, however, to be had at all prices, but the Settler will find it to his advantage to purchase from a well-improved breed, even if he pays rather a higher price. Handsome young bulls of the most esteemed herds will fetch 25 or 30 guineas.

Dairying has, by a few individuals, been much attended to of late years, and some cheese produced of a quality very creditable both to them and to the Colony: the systems followed are very various; the farmers, coming from different parts of the United Kingdom, naturally adopt that plan they are best acquainted with. The management of dairy cattle is yet very defective; the rude manner in which most of the cattle are bred in the bush-herds rendering them wild and untractable; scarcely any will stand to be milked without being put into bails or bilbows; the greater part are much addicted to kicking, and very few can be milked without securing their legs. The establishing and breaking in a good herd requires a considerable degree of patience and perseverance; very few really good milch cows are to be obtained by purchase; and most new Settlers will find it necessary to buy heifers and break them in themselves. The system unavoidably pursued by many persons, also tends to make the cows bad milkers and crafty. On all new farms a considerable time must elapse before sufficient land can be fenced, to form enclosures large enough to afford pasturage for the dairy cows; and even if small enclosures could be made for the calves, so as to separate them from their mothers, the latter would be continually hanging about the fence, and could never be habituated to go quietly to their feed, while they could both see their calves and hear their bleatings; the plan, therefore, most usually adopted, is to keep the calf penned up for about six weeks, and to allow it to suck as much as it can every morning and evening. If

the cow has more milk than the calf can take, she is clean milked after the latter has done sucking. At the end of this time they will begin to feed; they are then turned out with their mothers in the day time, penned up at night, and the cows turned out to feed;—in the morning they are brought in and milked; but very few will give down the whole of their milk, and some none at all, without the calf being let to them, just to draw the milk into the speans. By this system, the calf gets half the milk, and the quantity obtained from each cow seldom exceeds three or four quarts every morning. A considerable loss is of course experienced when the calf gets the whole of the day's milk; but, on the other hand, it is a sure way of rearing fine stock. Some persons, whose farms are enclosed, turn the cows and calves into separate enclosures, and milk the cows twice a day, only allowing the calves to suck as much as will cause the cow to give down her milk; this plan, however, pinches the calves, and checks their growth; and where they have nothing but the natural grass to eat, is certainly not a good one. If some small enclosures were carefully laid down, with good and nutritious grasses, or the calves had any other artificial assistance, it might do very well. Some have attempted to raise calves by hand, with only skim milk; but though this plan may have partly succeeded—and I have tried it with success to a limited extent myself, for the last two years—yet I am fully persuaded, that no good calves can be reared with the mere natural grass and skim milk; and that unless the farmer has first obtained some good cultivated grass, linseed, good hay, or other artificial food, any premature attempts of this kind will only be attended with loss. It is, however, probable, that when a farm is completely enclosed, and got under a proper system, it may answer very well to separate the calves from the cows at an early age, and either rear them by hand, or suckle them for the butchers, particularly if the plan were tried on young heifers, at their first calving: very few old cows, that have been accustomed to have their calves

run with them, can ever be brought to give down their milk without the calf being let to them. It is a circumstance not easily accounted for, that there does not exist any great demand for veal; perhaps it may be owing to the impossibility hitherto of procuring the article of good quality; the expense of rearing stock, even in the neighbourhood of Sydney, was so trifling, and the natural grass of so little value, that few persons would sell their good calves, unless at a higher price than the butchers could afford to give. But it might now possibly answer the purpose of some of the people who reside within a moderate distance of Sydney, and the other towns, and where their lands will not support good dairy cattle, to purchase calves of the dairy farmers, and by suckling them on cows of the more hardy kinds, keep up a constant supply of good veal for the markets. I have lately sold fat calves to the butchers in Sydney at 3½*d.* per lb. live weight. The distance to which cattle must be sent to graze in the interior, is now so great, and continually increasing, that many of the farmers who reside within 40 or 50 miles of Sydney, will soon find it to their interest to sell when young, or fat for the butchers, the greater part of their calves, and only rear the very best for the purpose of keeping up their stock to the numbers their own lands are well able to support.

Horned cattle are subject to few diseases in the Colony, unless allowed to suffer from poor keep; they are sometimes affected with giddiness in the spring, when the weather begins to get warm, and the grass is young and full of juices. I have always found that copious bleeding, and confinement to a dry pasture, effects a speedy cure. Cows, especially in dry seasons, are very subject to sore teats. The heifers, unless prevented, will breed very young, and the cows breed very regularly to an advanced age.

The principal market for beef is the King's stores, for the supply of the troops and convicts in the employ of the Government. The supplies are furnished by tender, and delivered at

the various stations and Commissariat stores in different parts of the country; the price in September, 1825, was 3¼*d.* per pound. The cattle are slaughtered by the Government butchers, at a certain price; the hide, loose fat, and offal, belong to the grazier, and these he disposes of in the best manner he can. Until very lately no beef was killed by the butchers in Sydney; many persons who received rations of beef from the stores, being in the habit of exchanging it with the butchers for mutton, and this was the only means they had of supplying their customers with that article. Now, however, considerable numbers of bullocks are slaughtered, especially in the winter; and good beef may at all times be obtained at about 6*d.* or 7*d.* per pound. The rapid increase in the numbers of horned cattle, may in time reduce the price of beef, or at least of lean stock, very low. But it seems highly probable that the great and increasing distance from which the supply must be obtained, unless artificial means are resorted to, will always enhance the value of fat cattle; and hold forth to the industrious farmer every encouragement to attempt the fatting stock upon turnips and other artificial food.

The perfection to which the breeding and management of sheep has been brought in New South Wales, may justly claim the admiration of every friend to industry, and every lover of his country. In this branch of rural economy it is, that the greatest and most decisive improvement has taken place, since to this object the whole attention and energies of the most wealthy and intelligent men in the Colony have been for several years directed,

The principal part of the original sheep stock were derived from India, a very unsightly and diminutive race, covered with long coarse hair, and more resembling the goat in appearance. By degrees this unprofitable breed was ameliorated by crossing with sheep from Ireland, England, and other places; and it was even found, that from the effects of climate, in two or three generations, without any admixture of

the breed, their covering began to assume the appearance of wool, and to retain less and less the character of hair; at length the real Merino breed was introduced by Mr. Macarthur and others. From this time the improvement has been every year more considerable; and within the last few years, a great number of Merino and Saxon sheep have been imported by different individuals; the price of rams has fallen in consequence, and they are now within the reach of the poorest breeders; the progress of improvement will therefore be much more rapid than heretofore, and it may be safely anticipated, that in twenty years more, nearly the whole sheep stock of the Colony will approach the perfection of the Spanish breed. The greatest facilities are presented for the attainment of this object; the climate dry, and free from noxious damps and fogs; the soil, more especially in the interior, sound and firm, covered with an abundance of nutritive grass and herbage; the country also open and clear, admitting a free circulation of air; all combine to render the country peculiarly adapted to the constitution of the animal.

The greater part of the sheep, like the horned cattle, are kept in the interior, upon lands held under tickets of occupation; they are kept in flocks of about 300, each having its separate shepherd. Wattle or hurdle gates made of split wood, with five bars, are used to inclose them at night. Three flocks are folded near to each other under the care of a watchman, whose business it is to watch them all night, to prevent any from being stolen, or injury from the native dogs, and to shift the folds every day. The watchman is provided with a moveable watch-box, and usually two or three dogs, and generally keeps up fires all night; and if he is at all atttentive to his duties, there is very little apprehension to be entertained of any loss. The watchman counts the sheep into the fold at night, and each shepherd counts out his own flock in the morning; so that if any are missing, it is easily ascertained whose care they were in at the time, and a proper enquiry can

be set on foot. Great care is requisite to see that the folds are shifted every day, as it both tends to keep the fleeces clean and preserve the sheep in health. Some few persons still continue to enclose their sheep in yards at night, but the practice is very reprehensible; it is impossible to keep the yards clean, even if carefully swept every day, which is not always the case. An idea was once prevalent, that it was dangerous to turn the sheep out in the morning till the dew was off the grass, but most of the graziers are now convinced there was no solid foundation for that opinion, and get their flocks out as soon as possible, and keep them out till dark. In the heat of the summer, when the flies are troublesome, the sheep will not feed in the middle of the day, but draw up into compact parties of 50 or 60 under the shade of the trees; in this state it is necessary to cause them to be moved occasionally, otherwise those inside get heated so as to endanger their health. Where the numbers will admit of it, the sheep are divided into the ewe flock, lamb flock, and wether flock; and where the stock is extensive, they are further subdivided into two-year-old wethers, three-year-olds, &c.; and in classing and dividing them into flocks, regard should also be had to the quality of their fleeces and state of improvement. The general time for putting the rams into the flock is in the month of October, but in some districts somewhat later, according to local circumstances; the rams are usually allowed to continue in the flock about six or seven weeks. The lambing season commences in March; and during its continuance, the constant care and superintendence of the owner or some very trusty person is requisite. It is a good plan to erect a temporary bark shed to shelter the new dropped lambs for the first few nights, and also to keep them and their mothers about the fold for a few days, until their strength will enable them to follow the flock through its daily walk as usual. Some difference of opinion formerly existed as to the propriety of lambing down in spring or autumn, but most breeders seem now agreed that the latter

is the preferable season. The rains in autumn usually commence in February, and a second spring immediately takes place. The grass grows very rapidly, and the most plentiful season for feed is generally the month of April. The winter is not much felt before June, and by that time the lambs, if dropped in March, will be strong and able to bear its severity. This plan was first adopted in the lower and warmer parts of the Colony, where the winters are short and mild; and it was found possible to lamb upon the plentiful grass of autumn, and wean upon the young grass of spring: but in the colder and more elevated districts, it is frequently necessary to wean the lambs in the month of August, or early in September, before there is any shoot in the grass; and this is the worst consequence attending the autumn lambing. But it certainly has great advantages: the heats of summer come on so rapidly, that the spring-weaned lambs were much weakened; and it has been found by experience, that winter reared lambs will make the most healthy and strongest stock. In feeding sheep, it is requisite to see that they are fed out from the folds in the morning, in such a manner that they do not go over the same ground on two following days; the more frequently their walk is changed the better will they feed, and consequently thrive more rapidly; and to promote this purpose, it is very advisable to change the situation of the folds occasionally to some other part of the run. The more they are left to follow their own inclinations, and the less they are driven about, the better. The principal care is to prevent the shepherds from being over officious. Provided they are *headed*, or kept in the proper direction, and not suffered to feed on wet or unsound ground, they will seldom come to any injury. The shepherds will sometimes stray to too great a distance, either through heedlessness, or to answer some purpose of their own, to be able to return to the folds in due time, without driving and hurrying the sheep; this should be carefully guarded against, as nothing is more injurious than

to put them into the folds in a heated state. So that the shepherd can keep the whole of his flock in sight, the more they are allowed to spread the better they will feed. The native dog will sometimes get among them, even in the day time, especially in the lambing season; but if ordinary vigilance is exercised by the shepherd, very little danger is to be apprehended from them. It is, however, very advisable to allow the shepherd an assistant in the lambing season, as it is impossible for him to look to every part of his flock, and attend two or three ewes that may be lambing, at the same time. The shepherds are sometimes attended by dogs, but their usefulness is very questionable; and some graziers have prohibited their shepherds altogether from keeping dogs. The shearing season commences in October, and should be finished before the end of November, in all parts of the Colony, except of the lambs, which may run a month longer. In the county of Argyle there is a kind of grass, with an extremely light seed-stem, which dries and breaks off towards the end of November or beginning of December; care should be taken to shear the sheep before this happens, as it is readily carried about by the wind, and attaches itself so firmly to the fleece, that it can never be separated afterwards, till the wool comes into the hands of the manufacturer. The fleece is always washed upon the sheep's back, in some river or pond, and they are allowed a few days to get completely dry, and for the yolk to rise again before they are shorn. Considerable difficulty is sometimes experienced in obtaining good shearers, and every person will find it to his interest, to cause as many of his servants as possible, to be instructed in this art, which they are generally very desirous to learn. I have always made it a practice, to cause any sheep that were to be killed, to be first shorn by a man that was a stranger to the art; and when any happened to die, to cause their wool to be taken off in the same manner; by this means I have instructed, and made good shearers, several

that never had a pair of shears in their hands before. When this work is performed by hired hands, the usual price is 3*s*. 6*d*. per score.

Sheep are subject to few diseases in this country, if properly attended to; flukes in the liver sometimes occur, but the rot is nearly or perhaps quite unknown; the foot-rot is also unknown; but the foot-halt, from a small worm or maggot which insinuates itself between the claws, occurs occasionally; at a proper stage of its growth it may be easily removed, by working the claws about backwards and forwards. The scab, where the sheep are badly kept, and the pastures overstocked, or where they are fed or folded upon wet land, and proper care not taken to shift the folds every day, very frequently makes its appearance, and is sometimes very difficult and troublesome to eradicate. I have found a strong decoction of tobacco in brine, with about one pint of spirits of turpentine added to every gallon, and, in extreme cases, one quarter of an ounce of corrosive sublimate, in the like quantity, to be, if carefully applied, a safe and effectual remedy. Blindness, occasioned by the formation of a scum over the eye, is very common, but may always be removed by lump sugar and calcined alum, in powder, blown into the eye with a quill. Sheep also frequently become what the shepherds term broken-winded; it is a morbid state of the lungs, in which the cavities and vessels grow up, and the process of respiration is carried on with difficulty; it may be discovered by the panting of the animals, and their wasting in flesh, through not being able to feed properly; there is, probably, no cure for it, and the best way is to kill them for meat as soon as possible. It probably arises from their being too much crowded in their fold in hot nights, or from being overdriven and heated.

The price of strong healthy young ewes may be stated at all prices from thirty shillings to three guineas each, according to the state of improvement their fleeces have arrived at. Three-

year-old wethers sell to the butchers at from 30 to 35 shillings each, if in good condition; fat lambs, of 8 or 9 months old, at about 20 shillings each. Thorough-bred Merino rams are from 40 to 60 dollars each; thorough-bred Merino ewes are rarely, if ever, to be met with for sale. The best cross-bred rams may be had from 12 to 16 dollars each.

Sheep kept in the more cultivated parts of the country, and about the residences of the proprietors, are managed much after the system above detailed. Folding is not much practised with any view to manuring the land, many proprietors being of opinion that it is injurious both to the sheep and their fleeces to fold them upon cultivated lands; and that feeding them upon turnips breaks their teeth and injures their mouths, and by preventing them from feeding to advantage, disposes them to premature decay; it being common in this Colony to keep ewes as long as they will breed, in fact, until they die of old age. But these objections do not apply to folding sheep upon clover leys, previous to sowing them with wheat, which would be a most beneficial practice; nor to the case of feeding sheep intended for immediate sale upon turnips. As far as I have tried folding sheep upon turnips, it fully answered my expectations; they ate them with great avidity, and the benefit to the succeeding crop of barley was very great; the manure, however, should be ploughed in as soon as sufficient land has been gone over for a day's ploughing, otherwise, if the season be dry, a great part of the manure will be evaporated, and its beneficial effects dissipated and lost. It may be safely stated that folding fatting sheep upon green crops would be the greatest improvement that could be introduced into the agriculture of New South Wales.

The good wool produced in the Colony is entirely sent to England; its very superior qualities are now well known and appreciated among the manufacturers, and the most improved fleeces obtain prices equal or superior to the best Spanish,

The charges of freight, commission, &c. are not very high, and the export realizes a most liberal profit to the grower. The wool is disposed of by agents or factors, who make their returns either by paying the bills drawn upon them from the Colony, or by sending out supplies to their correspondents, for the use of their farms and establishments. Many persons sell their wool to the merchants in Sydney, where it realizes from 1*s.* to 1*s.* 9*d.* per lb. according to quality. The coarse and refuse wool is worked up in the Colony, into a coarse woollen cloth for labouring men and convict servants; it is a very useful and excellent article of clothing, and much esteemed by them. The average weight of the most improved fleeces may be stated at about 2½ lbs. each.

It may perhaps be expected, that I should here give some calculations of the profits to be expected by embarking capital in sheep grazing; the usual returns are undoubtedly very considerable, and probably exceed those to be obtained from any similar way of employing money at present open to the public: but, without meaning to question the general correctness of some that have been already laid before the public, I must confess that I have little faith in calculations of that description, as, after all, the realization of the expected gains must depend upon the care, activity, and judgment of the undertaker, and a single error may entirely frustrate all his brilliant hopes. Persons acquainted with such subjects, will be easily able to make their own estimates from what has been stated in the course of this work. The system of sheep grazing here described is probably the best that could be adopted in the present state of the Colony, and while the natural grasses are the only resource depended upon for supplying the sheep with food; but it requires an immense tract of country to carry it on to any extent; a flock of 300 requiring at least 1000 acres of good natural grass to supply them with food at all seasons. The extent to which it may be carried is certainly very great,

but it has been always found, that the fleeces of sheep, when carried within a certain distance of the equator, have invariably lost the character of wool, and gradually assumed that of hair; what that limit may be in New Holland remains yet to be ascertained.

The breeds of swine are very mixed, but many of them very good; some persons inclose a piece of ground with secure paling and turn their swine into it in the day time, and bring them into the yards round the barns at night; others that have tracts of swamp or rough land in the neighbourhood, cause them to be followed by a swineherd through the day and brought in at night; others, where the country is not much cultivated, let them remain out in the bush without seeing them for perhaps several weeks together. Wild yams and other roots afford them subsistence, especially in swampy places; but in the neighbourhood of cultivated lands, this practice is frequently attended with mischief and disagreeable consequences. In seasons when the maize crop is abundant, a great quantity of very fine pork is fatted upon that grain, which is given to them whole; in the higher districts peas are much used; as also potatoes, rye, and barley, which are given in a boiled state, it being impossible in many situations to get the grain ground. Drake, which is very common among wheat, is also used in the same way, and is a most forcing food for hogs; I have always used boiled food for fatting swine, and found it answer as well as if ground. Pork fluctuates much in price, but usually fetches from 6*d.* to 9*d.* per pound.

Fairs and markets have been established by the Governor's Proclamations, but as yet they are little attended to; the butchers are in the habit of going round to the residences of the different graziers to which the stock for sale are generally brought down, and as most of them live within 40 or 50 miles of the principal towns, the practice is not attended with much inconvenience; a great number of persons have now, however,

settled themselves at a considerable distance in the interior, and the necessity of intermediate places of meeting between these and the purchasers of fat stock, is becoming more and more apparent; fairs and markets will therefore grow more into use, and be more frequented every year.

# CHAPTER V.

VARIOUS METHODS OF CLEARING LANDS—CLEARING GANGS —DRAINING—PARING AND BURNING—FENCING AND ENCLOSING—BUILDINGS.

For many years succeeding the first settlement, the Colonists were unprovided with any working cattle, and the use of the plough was consequently unknown; the scarcity of provisions, and the state of famine, to which they were often nearly reduced, also prompted them to endeavour to obtain some return from the land they attempted to bring into cultivation, as quickly as possible; hence they naturally fell into the system of stump falling, or cutting down the trees at about a yard from the ground; and having burnt off the stems and tops, broke up and cropped the land without regarding the stumps, which, as the plough was not used, and the hoe was the only implement of culture, were not much in the way. By degrees working cattle multiplied, and the plough was gradually introduced; still, however, the old way of clearing the land was persevered in, habit having reconciled the Settlers to the unsightly appearance of the dead and naked stumps, and to the inconvenience of working among them. The price of labour too was high, and the expense of removing them was greater than many of the Settlers, who were in indigent circumstances, could bear. At length labour became more plentiful, and the Colonists began to clear their lands in a better manner, and

also in many instances to remove the old stumps which had so long encumbered the soil. Various ways of effecting these objects were adopted by different individuals, according as local circumstances or their own judgment pointed out. These several methods of clearing land I shall now endeavour to describe.

Perhaps the most expensive, but certainly the most effectual, way of clearing land is to grub the trees up by the roots; this plan is best adapted to the more open parts of the country, where the trees have short bodies, and wide spreading tops; where the roots generally spread more immediately under the surface, and do not run down with many tap-roots perpendicularly into the soil. The best season for grubbing is in the winter, when the ground is soft and moist, and strong winds prevail. One man in that season will do more than three will in the summer, when the ground is hard and the weather calm. The earth should be thrown out all round the tree for the breadth of about a yard, so as to lay the roots completely bare. The labourer should then commence on the leeward side, cutting off every root close to the tree, and again at about a yard distant; or if they are large, and lie near the surface, following them out until they are so deep as to be out of the way of the plough; proceeding in this manner, and taking care to clear his work after him, by throwing out the earth and rubbish, round to the windward side. If the wind is brisk at the time, its force, acting upon the top, will generally bring down the tree, breaking the tap roots, before the lateral roots are well all cut off. The woolly gums are the most difficult to grub, as they have generally a second row of roots all round under the first, and the labourer will usually have to go twice round them before they will come down. The only tools required in this operation are a spade, axe, and grubbing hoe. When the trees are down, they should be cut up as soon as possible, while the wood is green and soft; lopping off the small boughs and limbs with an axe, and cross-cutting the principal limbs and stem,

if long, with a saw. They may then be suffered to lie and dry until the month of September, when they should be got together in large lumps and burnt, and the ground immediately broke up, to be ready for sowing wheat the ensuing autumn. The larger the lumps, and the more compact and close to the ground they are made, the sooner they will consume. Open forest land in the county of Argyle may be completely cleared, and got into a fit state to admit the plough, in this manner, at an expense of about twenty-five or thirty shillings per acre.—Another plan is to stump-fall the trees, and then to open out the stump all round, so as to expose as many of the roots to the air as possible, at the same time *sapping* the stump, as it is termed, that is, cutting off about a hand's breadth of the bark all round, as low down as possible. Stumps treated in this way, and suffered to remain two or three months, will get very dry; some large logs and smaller wood are then piled round in a triangular manner, so as to bring them in as close contact with the stump as possible; they are then set on fire, continually attended, and supplied with fresh fuel until the stump is consumed. Some trees burn much better than others; and where they are good burning woods, the destruction of the stump is easily effected in this manner. In the heavy timbered forest lands of the county of Cumberland, this plan is now much followed with great success; care must, however, be taken that the root is consumed sufficiently low to be out of the way of the plough. Another plan is to stump-fall the trees as before, then to open out the stump, and place some dry wood in all round it; then to *sod it up*, that is, to completely cover it with turf, leaving only a small hole on one side to put in some fire; this plan requires a good deal of attention; the fire will sometimes expire, and in some cases, if covered up too close, will convert the stump into charcoal. Where, however, it is skilfully performed, it will sometimes completely destroy the largest stump, burning it down into the roots a considerable distance. This plan has been much followed in eradicating

the old stumps remaining in lands that had been cleared some years; these could not be burnt out without bringing wood to them, which would be a work of some difficulty, as, from the destruction of the forests, there was frequently none very near at hand; but by grubbing the smaller stumps, and using the wood to set fire to the larger ones, the whole were easily eradicated. Grubbing large stumps is a most laborious operation, and is attended with much more trouble and difficulty than grubbing the tree in the first instance; the weight of the top at that time assisting to break off the tap-roots, and after it is down, by filling up the hole, the whole tree is completely brought to the surface; whereas in grubbing a stump, even after all the roots are separated, the raising the stump out of the hole is an operation of no little difficulty, and must be accomplished before it can well be burnt. Some persons have preferred digging a deep hole on one side, and by throwing the stump down into it, have succeeded in burying it out of the reach of the plough; others have taken off a belt of bark all round the tree, and killed it while standing, afterwards clearing the land by grubbing or stump-falling. This is attended with some benefit, as the tree is then ready for burning as soon as it is down, but then the wood gets hard and dry, and is much more difficult to cut up. Some have barked the trees, and set fire to them standing; many will completely burn down, but a great many stumps and fragments will remain, and require as much or more trouble to be got rid of, than the whole tree would in the first instance; and it does not appear that much benefit arises from the system. Upon the whole it may be safely concluded, that the best plan is either to grub up the trees by the roots, or, where the woods are of a good kind to burn, to stump-fall them, and burn out the stumps. Some persons have an objection to grubbing, where the land is poor and gravelly, as it brings too much of the sterile substratum to the top; in these situations, burning out the stump is certainly the preferable plan. The expense of clearing land it is very

difficult to give, with any degree of precision; perhaps when performed by hired labourers it may be about £2. 10*s*. or £3. per acre, in the forest lands of the county of Cumberland. There is a great deal of severe labour attending it, especially in the burning off; this part of the work requires at least four or five men to be able to perform it properly, as very large logs and trees are to be moved and rolled together. The fires require attending throughout the night; and those persons who perform this work by their convict servants, will find it to their interest to hold out some encouragement, so as to induce them to watch and keep the fires together all night. Large tracts of land have been cleared within the last few years by what are termed *clearing gangs*, which it will be necessary here to describe.

When Sir Thomas Brisbane assumed the Government of the Colony in December, 1821, he found the convict barracks and Government establishments crowded with men. A great many had been retained from a consideration of their being good labourers and useful men: whereas it is quite clear that they could never be so usefully disposed of, either for the crown or the community, as by assigning them to individuals who know how to make a good use of their respective qualifications. After assigning these to the persons who applied for them, there still remained a great many useless characters, whom no one would take, and for whom there was no source of profitable employment. Proposals were therefore published, that if any of the land-owners were desirous of having their estates cleared, the Government would send gangs to perform the works at the following rates:—

| | | | |
|---|---|---|---|
| For completely clearing forest land | 5 | bushels of wheat | per acre. |
| Ditto brush land ..... | 7 | ditto | ditto. |
| Rooting out stumps, and burning off, on forest land, where the timber is previously felled .... | 4 | ditto | ditto |
| Stamping forest land ..... | 3 | ditto | ditto. |
| Burning off forest land..... | 2 | ditto | ditto. |

A great many proprietors acceded to the terms; which indeed were very much to their advantage; and gangs of 22 men and an overseer were accordingly dispatched to the different estates. The men, besides the usual ration, were allowed a certain gratuity in tea, sugar, and tobacco, and the overseers 3*s.* 6*d.* for every acre they cleared. The proprietors had nothing further to do with them, than to see the work was properly performed, and to sign a weekly certificate of the quantity executed, by which the gratuity was issued. This clearing-gang system has been the means of opening and improving the country, and preparing for the plough many thousand acres, which would otherwise have remained in a state of nature. Many persons were much alarmed at the idea of letting loose, in some degree, so many hundreds of the worst characters in the Colony; and no doubt the measure ought to have been accompanied by an immediate and corresponding increase in the police. The name bestowed on the gangs also excited the merriment of the Colonial wits; and they certainly have been the means of clearing off the hen-roosts and gardens of many people; and also of clearing the carts of many a belated or drunken Settler or his servants, of their kegs of rum, baskets of tobacco, or other articles. But though they may have done some temporary mischief in the shape of depredation, yet their labours in clearing the country have conferred a lasting and permament benefit on the Colony. The plan, however, might have been rendered much more extensively beneficial; the gangs, after having completed a certain portion of work, say 100 acres, ought to have been removed to some other estate, and thus the benefits of the system would have been diffused as widely as possible. Many proprietors who applied, were never able to obtain a gang, while in the estates of others they were suffered to remain above three years; and a great quantity of land was cleared for the large graziers and others, which it is probable they will never bring into a state of cultivation. The government seem to have

given the preference to those whom they thought would pay the most punctually; but the land itself might always have been made security for the payment of the stipulated quantity of wheat; and thus many striving and deserving people might have been materially assisted. The wheat that was received in payment for the labour, never remunerated the Government for the expence incurred in maintaining the convicts while performing the work; but a very considerable saving was nevertheless effected, since the whole of these people, before this plan was adoped, were employed in various public works, the greater part of which were wholly useless.

The quantity of dead wood lying about every where upon the surface in forest lands, is a great disfigurement to the country, giving every part a littering and slovenly appearance; it also materially injures the pasturage, preventing the stock from feeding regularly all over the surface; and tearing and injuring the fleeces of the sheep. Some proprietors have caused it to be collected and burnt; the expense of this improvement may be about 2*s*. 6*d*. or 3*s*. per acre, and where it can be effected it is very desirable.

Considerable tracts of land have been cleared by some wealthy people for the mere purpose of grazing, without any intention of breaking up the land for tillage; some, however, contend that this practice is useless, or even prejudicial, as the trees only afford a beneficial shade and protection to the grass; but there does not seem any good foundation for the opinion; the frosts have certainly more effect upon the grass in open places than where it is covered with trees, but the food in summer is undoubtedly more sweet and nutritive, and the pasturage and free circulation of air more beneficial to sheep. Many people, also, in clearing tracts of this description, have left straggling trees, as they contend for ornament; but this practice does not seem founded either in correct taste or sound judgment; lofty naked trees, with a few branches and scanty

foliage at the top, can never be very elegant or beautiful objects, and afford no shade or shelter to the stock; while single trees that have grown surrounded by others in a thick forest, invariably become sickly and go to rapid decay, when exposed and left by themselves in this manner; their limbs are continually dying and falling off, till in a few years nothing is left but bare leafless trunks. The better plan seems to be, to clear the old forest entirely away, and then to plant small clumps of exotics, or of trees indigenous to the country; any mimosas, acacias, native cherries, or other trees that have a thick green foliage, and afford a good shade for the stock, should, however, be preserved; and care must be taken not to destroy all the wood and leave the farm without firing, as has been the case with some over-zealous improvers.

Draining is very little practised; indeed in many parts of the country it is not much needed; open ditches to carry off the surface-water are generally all that is required. The sides of these should be formed with a considerable slope, as the force of water is so great in heavy rains, that it will frequently undermine and wash away the sides, and small ditches are by this means sometimes converted into immense gulleys. On Mr. John Macarthur's estate some very durable watercourses have been made, forming the ground into a slight hollow and sowing the bottom with white clover; the roots form a perfect mat, and completety hold the soil together, allowing the water in the time of rains to flow freely over. Open dry ditches, kept free from vegetation, would perhaps be the most effectual plan that could be adopted to stop the progress of the annual burnings of the grass. Under draining is very seldom resorted to: I formed a very good one upon my own farm in the following manner: a ditch was dug 18 inches deep, 18 inches wide at the top, narrowing to 12 inches wide at the bottom; a pipe was then cut at the bottom of this with a narrow spade, six inches broad and four inches deep; over this some split

logs or slabs of wood, six feet long, and of sufficient width to cover the pipe were placed, the sods put in upon them, and filled up with earth; the expense was about 4*d.* per rod.

Irrigation has never yet been attempted; there are some few situations in which it might be practised; and the benefits that would arise from such an improvement, in this warm climate, would be immense; few persons, however, are yet in possession of sufficient capital to attempt expensive improvements of this nature.

Some few attempts have been made at paring and burning, and in some cases with much success; this operation should not be attempted except with due caution, as in some instances it is productive of injury; the staple is in many soils very thin, and will not allow any part of it to be converted into ashes, without doing serious mischief to the land. Earth and turf obtained from creek sides, and other places not in cultivation, may, however, be burnt, and converted into a most valuable and forcing manure; especially for turnip crops. In some places new lands that abound much in vegetable matter, and woody fibre, and when the staple is deep, may be pared and burnt to advantage. In the summer of 1823, I pared with a plough, and burnt part of the turf upon about three acres of new land; about one fourth of the turf was burnt, and the quantity of ashes obtained not more than 20 cart loads to the acre. The land had in all four ploughings, and was then sown with turnips; and the crop was perhaps one of the finest ever seen.

Fencing and enclosing land, is the greatest and most important improvement that can be effected upon it; to the acquiring a proper knowledge on this subject, the attention of the new Settler should be early and closely devoted, since, without doubt, it is the foundation and basis of every other improvement to be afterwards expected. Enclosing with post and rail fences of split wood, has been brought to a very conside rable degree of perfection in this Colony; and is

executed in a style of great neatness and stability. This work is usually performed by free men, who have acquired the knowledge of this branch of rural labour since their arrival in the country; very few common labourers from any part of the kingdom being at all acquainted with it. The prices at which it is generally performed, are for four-railed 3*s.* 6*d.*; for three-railed 2*s.* 6*d.*; and for two-railed 1*s.* 9*d.* per rod. The best woods for the purpose are the blue-gum, iron-bark, stringy-bark, and box trees. The tools used in splitting are a cross-cut saw, scoring axe, set of seven wedges, and two mauls or beetles. In cutting out the mortices, a very singular tool, called a morticing axe, is used; it has a short handle, large eye, head about a foot deep or long, and with an edge about an inch and a half wide; some use them double headed, shaped like an adze on one side, and an axe on the other; and this perhaps is the best construction. In setting up, a common spade, and a post-hole spade, are requisites for digging the holes; and if there are many stones, a small crow-bar or pick-axe will be useful in loosing them; an adze or broad axe are used for trimming and fitting the rails for the mortice. When two men have agreed with a proprietor to execute a job of this kind, they go into the bush where timber is most plentiful in the neighbourhood, and if it is at a distance from any habitation, they usually construct a temporary hut for their residence while the job is in hand. They then select the straightest and freest grown trees, fell them with a cross-cut saw, cut them off to proper lengths, and billet them out into as many divisions as the size of the tree will admit; they are then split or run out with wedges into rails or posts; not from heart to bark as is practised in splitting woods in England, but across the silver grain. In the same manner are split, logs or slabs for building, rafters, joists, palings, and shingles, except forest oak shingles, which are split from heart to bark, or the same way as the silver grain. Posts are cut five feet six inches, and rails nine feet long. The mortices are cut quite through

the posts, about four inches long, and two inches wide; the ends of the rails are sometimes placed one over the other in the mortice, and sometimes one by the side of the other; which last is much the neatest plan. The ends are trimmed away so as to overlap each other, and project through the mortice on both sides; two pannels are invariably put up to a rod, and the posts are always sunk two feet in the ground, which allows the fence to be three feet six inches high. In enclosing lands for cultivation, four rails are made use of; the three lower ones being placed pretty close to each other, completely exclude pigs or other small stock. Lands for grazing, are generally enclosed with three rails, but large enclosures intended for horned cattle or horses, and especially where timber is scarce, are frequently enclosed with two rails only. The size of the enclosures or *paddocks*, as they are termed, should be regulated by the purpose for which they are intended. Lands for cultivation, may be divided into pieces of 30 or 40 acres each, where the quantity intended to be cultivated is considerable. Land for grazing may be thrown into larger pieces, but it is a common fault to make the paddocks too large; the graziers are not able to shift the cattle properly, and make them eat up the grass clean; and a great deal of food is in consequence wasted. These kind of fences are perhaps, under all the circumstances, the best that can be put up in the present state of the colony; if substantially executed, they will stand 20 years, and with a new set of posts, and a few new rails, may be again set up for a further term. Timber, however, is growing scarce, especially in those parts of the country that have been long settled; and it will be necessary very shortly to have recourse to live hedges or some other method of enclosing. Very few attempts have been yet made to raise live hedges, and therefore little can be said about them. The lemon makes a very pretty evergreen hedge, but is slow of growth; the thorny acacias of India and Brazil have been introduced, and most probably

will make excellent hedges. The whitethorn is said to assume more the character of a tree, and to bear less thorns than in Europe; but this does not appear to be the case with some growing upon my own farm, and it is probable, that by being kept properly trained and brushed back, it would grow more scrubby and make a good hedge. Enclosing with dry stone walls, similar to those used in Derbyshire and other parts of England, has never yet been tried in the Colony: it is not a very sightly, but a very durable method of enclosing, and is easily kept in repair. In some parts of the country there is a great quantity of freestone, that lies in thin strata; this will readily split out, and where it lies convenient to the proposed work, would probably be an excellent material for enclosing. Walls of this kind can be set up at a moderate charge, and if properly executed, will stand for ages.

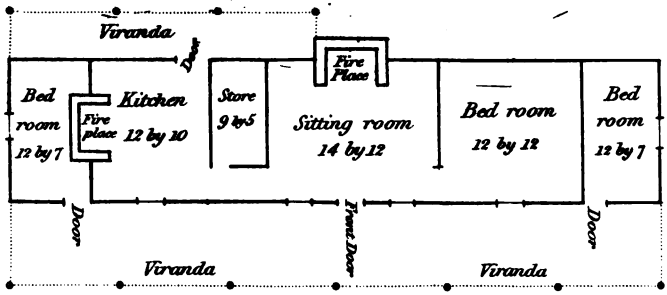
The time and expense bestowed upon setting up the requisite buildings, are among the greatest drawbacks upon the success of a new Settler; and on this point the best advice that can be offered to him is, to proceed with extreme caution, and to build nothing that he does not feel to be absolutely and indispensably necessary. Happily the materials for such buildings as are necessary in the infancy of an establishment are generally at hand; and the Settler will do well not to expend a single shilling this way more than he can avoid, and to put up with such a dwelling, and such conveniences as may be comfortable, which are easily obtained, and defer the erection of more costly edifices till his accumulating means render such an outlay prudent and desirable. The capital that would be required to build a good house and offices at the first commencement of of a Settler's career, if invested in live stock, and employed in the cultivation and improvement of his land, would soon afford him the means of erecting those buildings out of the mere proceeds; whereas if sunk and expended in that way at first, unless his funds are large, he will stand a chance of wanting the means of supporting himself in it. In treating hereafter

of labour, and the way in which it is maintained, the prudence of the conduct, here recommended, will be more evident; and it will be better to proceed now to describe the buildings absolutely requisite upon a new farm, and the cheapest way of erecting them.

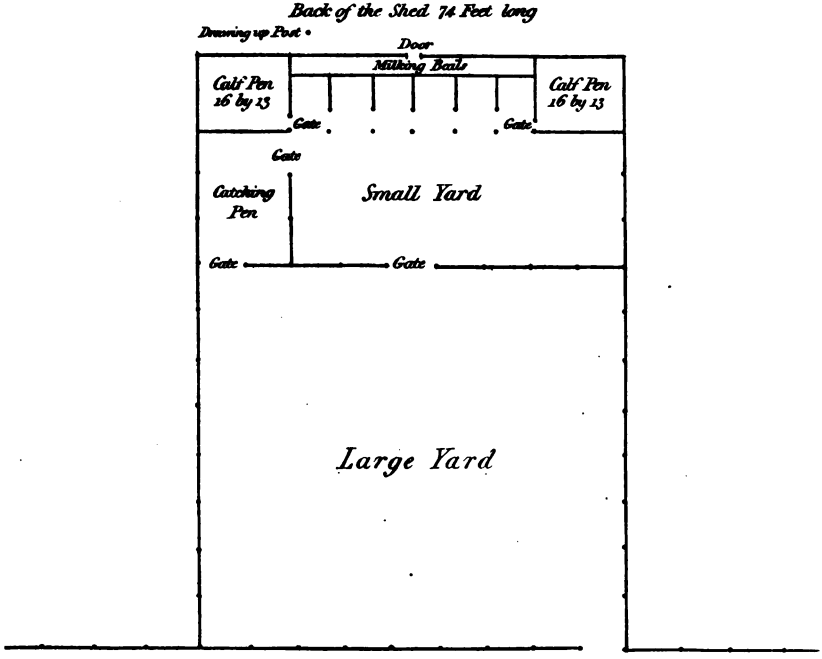
Many persons on first taking possession of a grant of land, content themselves with the shelter afforded by a bark hut, while they put in their first crops, or carry on their first and most important operations; and many having once accustomed themselves to living in this way, will rest content with no better habitation for perhaps several years; until absolutely compelled by the advancing state of the population around them, to think of erecting a better. But although in cases where the Settler's capital is limited, and it is necessary to apply every shilling to the purchase of live stock and improvement of his land, living in a bark hut may be a necessary and praiseworthy line of conduct; yet those persons who have been accustomed to all the comforts and conveniences of a good house, and especially such as have families, might, by submitting to such privation, become disgusted with the hardships of their situation; and it is certainly a prudent step for every one, as early as possible, to construct himself a decent dwelling; taking care, however, always to bear in mind, that in such a building, grandeur and ornament must be kept out of sight; and that comfort and convenience are the only requisites to be studied. The annexed plan will perhaps be found to contain all that is necessary for such a building.

This plan comprises a sitting room, three bed rooms, kitchen, and store room; besides a loft extending the whole length of the main body of the building; which will be useful for stowing away many articles in perfect security; and a house of this kind, will be found to contain sufficient comfortable accommodation for a moderate sized family. The kitchen, store, stiting room, and largest bed room, are under the main roof of the building; the small rooms at each end are skillings or lean-

to's; these may be extended out under the viranda if required. Its narrow width will allow of split wood being used for the rafters, joists, and beams, which could not conveniently be done were it much broader, as it is difficult to run out split materials straight, when required of a great length. The other dimensions of the house may be altered according to the size of the family, or other circumstances. Having selected a proper scite, which should always be on rising ground, so that the house may stand dry and healthy, the next step is to mark out the dimensions and to cut out the foundation with a spade; some persons lay down sleepers of wood for a foundation, but the best plan is to raise a wall of rough stone, with well tempered loam for mortar, so as to be six inches above the ground at every part, when brought to a level; strong corner posts should also be put down, and firmly set in the ground, at each corner of the main body of the building; this plan indeed exposes the part in the ground to decay, but as the timbers used in the building will be green, and only roughly squared with an adze or axe, it will be difficult to joint and frame it securely; particularly as it is intended the building here proposed should be erected by common labourers, without any, or with very little, aid from carpenters; and as it is not expected a house of this description will last for many years, setting the corner posts into the ground will give it a great degree of strength and firmness. Having completed and levelled the foundation all round, risings should next be placed upon it, properly tenoned into the corner posts; and wall-plates fitted for the top all round; grooves about two inches deep and 1½ inches wide, should be cut upon the upper side of the risings and the under side of the plates, and into these the ends of split logs or slabs should be fitted above and below, to form the walls, leaving proper intervals with posts for the doors and windows; when the logs are all in their places, the plates may be pegged down and secured; the inner partitions may then be made in the same manner; the joists and tie beams put on and secured,




GROUND PLAN & ELEVATION OF A HOUSE.




GROUND PLAN OF A MILKING YARD

London, Published June 1826, by J. Cross, 18 Holborn, opposite Furnival

and the roof raised. Shingles are the best covering for every description of buildings in this Colony, and are split out by men accustomed to the work at 12*s.* per thousand; but proper wood for the purpose is not always at hand, and as the Settler naturally wishes to cover in his dwelling as quickly as possible, a covering of bark will answer every purpose until he has leisure to procure a better. The inside should then be lathed and plastered throughout, and also the outside under the virandas, where it is out of the weather; the exposed parts should, if possible, be weather-boarded; and the floors laid with boards. The quantity of sawn stuff required in building a house of this kind is so small, that it is hardly worth while to hire a pair of sawyers to cut it; but in most cases it may be procured within a moderate distance. Weather-board may be nailed up green, but flooring board should be suffered to remain some time before it is nailed down, to allow for its shrinking. Lime is frequently a scarce article, and difficult to procure, very little being yet burnt in the interior, even where limestone is plentiful; the greatest economy must therefore be observed in using it; the chimnies may be built of stone, and well-tempered loam; this, also, mixed with some coarse grass, will do for the first coat of plastering; the second coat should have a portion of lime; and the whole being well whitewashed within and without, will form a very comfortable and decent dwelling. The expense will not exceed seventy or eighty pounds, when completed and shingled, and it may be executed by any man of common ingenuity, without the aid of either carpenters or bricklayers.

Lime is burnt on the sea coast from shells, which are found in great abundance at Newcastle and other places; the price at Sydney, I believe, is 8*d.* per bushel—at Liverpool it is 1*s.* Brick earth abounds almost every where, and in many places of good quality. Bricks are usually burnt by free men; they dig the earth as near to the spot where they are to be used as it can be found, make the bricks, burn them, and in fact per-

form the whole labour at about 12*s*. per thousand. Brick buildings are now becoming very general throughout the Colony; but new Settlers can seldom make use of that style of building at their first commencement; dispatch and cheapness must then be their principal consideration. Sawyers usually construct a temporary hut in the bush where there is plenty of timber, and reside there whilst the job they are hired for is in hand. Sawing is performed at the rate of about 10*s*. or 12*s*. per hundred feet.

A dairy and milking-yard are places to the erection of which the Settler must turn his early attention; the dairy is one of the first things that will begin to afford him a return; and as the breaking in his cows and heifers, and forming his dairy herd, will occupy some time, the sooner he commences the better. An underground dairy is best, and may be erected at a small expense by digging into the south side of a hill, building the walls of rough stone and loam, and covering it with bark or shingles. Stone benches should, if possible, be formed, for the milk pans to stand upon; and the floor should also be paved with stone. The dairy should be divided into two rooms, in one of which a chimney should be built, for the purpose of heating water to scald the utensils. The milking-yard should be situated as near as possible to the dairy: the annexed plan is perhaps as good as can be devised. This plan, it will be seen, comprises two calf pens, six milking bails, two yards for the cows to stand in, and a catching pen. The dimensions and number of bails may be increased or diminished according to the number of cows likely to be kept. The one here delineated will serve very well for about 30 cows. The calf pens should be paved with stone, and, if kept well littered, a considerable quantity of dung may be obtained from them; the small calves should be kept on one side, and the large ones on the other. As dispatch in milking is very desirable, especially where cheese is made, the calf-pens should be furnished with small gates on hinges, which are most convenient for turning

the calves in and out; and the bails should be furnished with good leg-ropes and cleats, to secure the cows legs. Six or eight cows may be put into the small yard at a time, which will render it much easier to manage them, and prevent their running about when required to be put into the bails. The catching pen will be found very handy, for the purpose of catching young heifers when breaking them in; this is performed by putting a rope, with a running noose, over their horns, by means of a pole; and in a large yard is attended with much personal danger, when they are very wild and vicious; they can, however, be driven into the pen with two or three quiet cows, and roped without difficulty, by a man standing on one of the posts; when properly secured, the rope should be passed through a hole in one of the logs at the back of the yard, to the post behind, where a man should be stationed, to take a round turn, and draw in the slack of the rope as the animal comes up; by this plan two men will draw up a strong and vicious beast without danger, better than six could by any other means. The back of the yard and the calf-pens should be enclosed with split logs, and the milking bails and pens covered with a shed. The yard and divisions should be enclosed with a stout five-railed fence, with strong posts. It must be observed, that gates hung upon hinges are very seldom met with; the usual way of securing such places is, by what are termed *drop rails*. The posts are formed of bodies of trees of a proper size, stripped of their bark; mortices are cut in each for the ends of the rails; in one part they are cut of more than the usual length; the wood on one side of the mortice, at the upper part, is cut away through to the side of the post, so as to allow the ends of the rails to slip in and drop down into the lower half of the mortice; a peg is put in over them, which prevents the cattle from lifting them out with their heads. The best rails for this purpose are round poles, as they are better to handle than split wood. This method of closing a gateway

is cheap and economical, and for some purposes preferable to hanging gates, which are continually out of repair.

Comfortable huts for the men should be by no means neglected; many people suffer them to live in dirty and comfortless bark huts; but it is certainly to the interest of every Settler, to get his men comfortably lodged as soon as possible. The best and cheapest huts are built of logs, plastered within and without, with a bark or shingle roof, and stone chimnies; 14 feet long by 12 wide will be found large enough to accommodate three men, and it is better not to put too many together into one hut.

Stables are not much required in New South Wales, especially upon a new farm; the most common log building, with a bark roof, will answer every purpose for some years. Horses in general are most healthy, and better able to endure fatigue, when kept entirely in the open air.

Small barns that will take in a moderate-sized stack are best adapted to the Colony; they should be built with the doors sufficiently high to allow a loaded waggon or cart to draw in. The barn may be built with lean-to's or skillings all round, which will make useful granaries and stores, or coves for corn before it is cleaned. A free draft of air through every part of the barn is very beneficial; and split logs, without weather-boards, are no doubt the best materials for the sides. A spacious barn floor is very useful, as thrashing is sometimes the only work the men can be employed upon in wet weather, and is also particularly useful for the purpose of shearing sheep upon. It is frequently necessary to thrash upon the ground the first year, as it is of no use to lay down a barn floor until the brands are properly seasoned: and the Settler should endeavour to get some wood cut for this purpose as soon as possible. The barn should be enclosed by proper yards, in order that the store pigs may be kept about the barn door when thrashing is going forward.

A piggery is a most useful appendage to the farm-yard; the styes may be ranged in a row, paved with stones, and the sleeping place laid with logs. Trunks of sound trees, hollowed out for the purpose, make very good troughs. A yard should be enclosed in front for the purpose of turning the hogs out when it is necessary to clean their styes. A shed also should be erected near at hand, with a large iron boiler set up, for cooking food for the fatting hogs.

A lodge sufficiently large to contain the carts, ploughs, and other implements belonging to the farm, is a most useful building. A grindstone may be set up under it, and some of the men may be usefully employed in grinding up tools in wet weather; and the hand-mill for grinding corn may also be conveniently set up in this situation. A building similar to the hay barns made use of in some parts of England, being merely a roof set upon lofty posts, would be extremely useful for the purpose of preserving hay and straw, and might also be employed to receive corn in harvest time, especially in wet seasons, as it would thereby be secured at once, without the risk and delay occasioned by the necessity of thatching stacks.

A secure place where the harness and tools belonging to the farm can be kept and locked up, is very essential; part of the stable or cart lodge may be advantageously partitioned off for that purpose. A small strong yard, with a drawing-up post, for the purpose of catching and harnessing the working oxen, is very useful, especially in breaking in young bullocks.

The foregoing are the principal buildings required on a new farm; in erecting them, the Settler will do well to proceed with care and caution, and endeavour to set them up in the order in which he foresees they are likely to be wanted. The house, men's huts, dairy and milking-yard, are generally the first consideration; then the piggery, cart-lodge, and stable; and lastly the barn; this building will probably not be much wanted the first year; the small quantity of grain a Settler is usually able to get in the first season, may be very well

thrashed out upon the ground in the open air, and if he succeeds in getting up his barn against his second harvest, he is generally quite in time.

One of the first cares of a new Settler should be to enclose a sufficient piece of land, for pasturage for his working cattle; until this is done, they are necessarily turned out of a night, and when wanted in the morning, are very often not to be found; and the whole or best part of the day is occupied in searching for them; much loss of time and delay of business is consequently occasioned, and nothing can go on with regularity, till this very important point is accomplished.

Many persons on their voyage out, and also very frequently before they leave their native country, amuse themselves with drawing plans of the house, offices, and buildings they intend to erect upon their expected grant. These things look very well upon paper, and may serve to pass away an idle hour; but, very few of these castle-builders give themselves any trouble to reflect, that to realize their brilliant and tasteful ideas, would require a sum of perhaps ten thousand pounds, when they most probably are not in possession of as many shillings. Every person, however, when he has actually seen and selected his grant, and decided upon the situation for his farm-yard, (which should not be done without the most mature consideration,) will do well to sketch a plan of his proposed buildings, and to let every thing he undertakes be part of this general plan; his improvements and buildings will then have an uniform and regular appearance, and much future trouble and labour will be saved. Care must also be taken to allow sufficient room for any future additions, which the advancing state of his establishment may render necessary. And as his surplus produce and means of maintaining labour accumulate, his first temporary buildings of wood, may be gradually replaced with more substantial and convenient edifices of brick or stone.

# CHAPTER VI.

REMUNERATION OF LABOUR—FREE LABOURERS—VARIOUS REMARKS ON DOMESTIC MANUFACTURES AND OTHER MATTERS CONNECTED WITH THE ECONOMICAL MANAGEMENT OF A FARM—ASSIGNMENT, MAINTENANCE, AND MANAGEMENT OF CONVICT SERVANTS—FEMALE SERVANTS—REGULATIONS RESPECTING GRANTS OF LAND—INFORMATION TO PERSONS ABOUT TO EMIGRATE, RESPECTING THEIR PASSAGE, &c.

In order to understand clearly the expense of labour in New South Wales, and the manner in which it is remunerated, it is necessary to bear constantly in mind, that it is customary throughout the Colony for the proprietor to supply all persons employed upon his farm, whether free-men or convicts, with provisions and all other necessaries. These articles, termed in the Colony *property*, are charged to them at customary prices; which are very much above the cost of producing them if articles of home growth, or of purchasing them if imported goods. The profit thus laid on is, in most cases, 50 and in many 100 per cent. above the real market-value: thus wheat is charged at 10*s.* per bushel, and salted pork at 1*s.* per lb.; and tea, sugar, and other articles, in the same way. In making a contract with brickmakers, sawyers, fencers, or mechanics of any description, who are free-men, it is always usual to stipulate that they shall draw the whole of the provisions and necessaries they may require,

while about the proposed work, from the employer; at the same time it is always understood at what rate the several articles are to be charged; and the knowledge of these prices enables the people to adjust the price they shall demand for their work. It is therefore evident, that the price of labour is perfectly nominal, and in most cases exceeds by at least one-third the real money-prices. The system, however, in the present state of the Colony, is productive of many advantages, both to the employers and their people: the Settler is enabled, if he manages properly, to carry on his improvements out of the produce of his farm, which passes at once from him to his people, without the intervention of any middle men, and thereby saves him all the trouble and expense of finding a market for his produce, and converting it into money to pay his labourers; while the labourer, having a full previous knowledge of what he is to pay for his necessaries, is equally well satisfied. The knowledge of this circumstance will sufficiently explain the imperious necessity that every prudent Settler should feel himself under, to proceed cautiously with his buildings and other improvements at first setting off; to apply his whole strength and attention to the cultivation of his land, and to invest as much money as possible in live stock, until he has succeeded in obtaining a surplus produce both of grain and meat; he may then gradually increase his establishment, and enlarge the scale of his operations and improvements with safety. This more especially applies to buildings, to erect which he will generally have to hire free-men; and as, at first, he will have to purchase provisions wherewith to feed them, which is always attended with trouble, and sometimes with loss, and as at that time also, he must pay money to the shopkeepers for every article he requires for his men, it will amount to the same thing as if he were to pay his men entirely in money at once; whereas if he defers his more important and expensive improvements until his farm begins to afford a surplus produce, and the increase of his live stock begins to be

available, the greater part of the remuneration of his people will go out in articles of his own produce; and the property or necessaries he may require for their use, will be principally, or perhaps wholly, obtained in exchange for his dairy produce and other marketable articles. Thus an estate, if prudently managed, may be made to gradually improve itself; every year will produce extended means of further improvement; and things may in the course of a few years be accomplished, which, if attempted prematurely, would exhaust the means of the most wealthy. I have already had occasion to caution new Settlers not to proceed too hastily; and I cannot too often urge the prudence of their commencing their operations on a scale that they are satisfied is perfectly within their ability to proceed with; and upon no account to run in debt, or do anything upon credit; nor to incur expenses rashly, which may involve them in difficulties, from which it may never be in their power to extricate themselves.

There are now a very considerable number of free labourers in the Colony; most of them were formerly convicts, but have served their time out or obtained their pardon; there are also a great number of men who hold tickets of leave, the nature of which indulgence will be explained in treating of convict labourers. Many of these free-men hire small portions of land upon clearing leases; that is, they undertake to clear and enclose from ten to twenty acres of land in three years, free of rent; the proprietor furnishing them with provisions for a certain part of the term, and sometimes with tools; the conditions of these clearing leases are, however, very various, and it is impossible to give them with precision. Many others of the free-men employ themselves as fencers, sawyers, brick-makers, and shingle-splitters; and great numbers hire themselves as yearly servants in various capacities. The wages of a good ploughman, shepherd, stockman, or dairyman, are from £20 to £30 per annum, besides the usual ration of provisions. Where persons have got sufficient land into cultivation, to

enable them to keep one or more ploughs constantly employed the whole year through, it will, in many cases, be advisable for them to hire good ploughmen, who can work with a pair of horses or bullocks without a driver; as convict servants of that description are not always to be met with, especially such as have been accustomed to work with bullocks, which most English ploughmen have an objection to. There are many very useful men of good character to be found among these free-men; and where people really have occasion for any particular description of persons, and can make full use of their services, the extra expense of their wages is not an object. Labourers are very seldom hired by the day; perhaps 3*s*. to 4*s*. may be stated as common wages; but in general all labour, not performed by yearly or convict servants, is done by the job.

The wages of free mechanics are in general very high; the greater part of the best workmen find employment in the towns, and cannot be tempted into the country unless very great wages are offered them; the daily pay of good carpenters, bricklayers, wheelwrights, and others of the most useful description of tradesmen, is from 8*s*. to 10*s*. per day. Most persons, however, who have any buildings to erect, endeavour to get it performed by contract, either by the piece or by admeasurement. The generality of the mechanics are a drunken, dissolute set of people, and a continual source of trouble and vexation to those who are under the necessity of employing them. Blacksmith's work, in making new articles, is usually performed by the lb. the employer finding iron, and the smith returning 90 lb. of worked for every 100 lb. of bar or other iron delivered to him; the charge for workmanship is generally 4*d*. per lb. Wheelwright's work is performed by the job or piece, much as in England. Some persons who have large establishments, and a considerable quantity of land under cultivation, keep a blacksmith and wheelwright of their own constantly employed upon their farms; various agreements

are made with these men; sometimes they are hired by the year, sometimes by the week, and sometimes are paid by the job for the work they perform, and in some few cases they are convict servants. It is usual to allow men of this description, and other tradesmen employed upon farms, if they have any spare time after they have done the work required by their employer, to execute any jobs that may be brought to them by the Settlers in the neighbourhood; this plan is attended with advantage both to the men and the community at large; and provided the men, if convicts, are not allowed to go away from the farm for the purpose, is productive of injury to no one. When people have succeeded in obtaining an abundant surplus of provisions of their own produce, they may, with advantage, carry on some of the most common and useful manufactures, for clothing their own servants, especially as they will generally have plenty of the raw material of their own, which if sold would realize them little or nothing; thus the dirty and refuse wool from their flocks at shearing time, and also the fleeces of such sheep as may die, or which may be occasionally killed for domestic consumption when the wool is short, may be very profitably worked up into coarse clothing for the convict servants; this kind of manufacture is much esteemed by them.

It is necessary for every one to kill the beef, mutton, and other meat required for the use of his family, and people in his employ; and consequently every one has plenty of raw hides, which will sell for little or nothing if carried to market; these hides, with any kangaroo or dog skins they occasionally obtain, may be readily converted into useful leather, the black wattle, or mimosa bark, which contains an excellent tannin, abounding all over the country; the process is extremely simple, and attended with very little trouble. By employing a shoemaker, this leather may be worked up into very useful shoes and harness, and will be productive of a very considerable saving of expenditure in those articles. A small

patch of flax should be grown every year; there are plenty of men among the Irish Convicts who are well acquainted with the culture and preparation of flax; the greater part of the labour may be performed in-doors, in wet seasons, when the men are not otherwise employed. This flax may be beneficially worked up into twine for shoemakers, towels, sacks, and other useful purposes, and, if sufficient labour is bestowed upon it, may be made into good common linen. There are a great number of weavers, shoemakers, and tailors, sent out among the Convicts, whom it is always easy to procure, by applying for them to the Local Government. They should be assigned a weekly portion of labour to perform, and all extra work should be paid for, if they are not furnished with sufficient work by the Settlers of the neighbourhood to employ their spare time, which will generally be the case. Very good long wheels for spinning woollen are made in the Colony, at 8*s*. each, and flax wheels at 15*s*. each. Common looms may be had for from £2 to £3; cards and hackels are very dear, and should be procured from England. Domestic manufactures are, however, very little attended to, especially by the lower order of Settlers; this may be attributed to the great scarcity of women, and the consequent indolent and dissolute character of those who are in the Colony. Every family should manufacture its own candles and soap, which is easily effected, and by which a most important saving is accomplished. In general it may be observed, that every family should endeavour to live as much as possible within themselves —that is, to supply their wants with their own produce, and to buy nothing which they can possibly avoid, or for which they have any article that may be substituted.

The regulations, under which Convicts have been assigned to the service of individuals, have undergone frequent changes from the first commencement of the Colony; it is unnecessary here to go into any detailed history of these fluctuations; and I shall therefore proceed at once to endeavour to describe, as

concisely as possible, the system as it at present stands; a perfect knowledge of which is most essential to the Settler, but, unfortunately, the subject is involved in very considerable difficulty and uncertainty.

By a Government order of the 7th December, 1816, it was directed, that each male Convict should receive, in addition to the usual ration, which was either 7 lbs. of beef or mutton, or 4 lbs. of pork, and either 10½ lbs. of flour, or 12 lbs. of wheat weekly, an annual sum of ten pounds, in lieu of certain over-hours, and also of all Saturdays, which they had formerly been allowed to employ to their own advantage; out of this annual pecuniary allowance, which was improperly denominated wages, the Convicts were to supply themselves with clothes and other necessaries. These articles were supplied to them by their employers, and charged at the customary prices, according to the general system already described. This practice was in many instances very much abused; the masters charging the articles, with which they supplied their servants, at exorbitant rates, generally contriving to bring them in debt at the year's end, and totally precluding the possibility of their laying by a trifle against the period when they would be at liberty. The servants perceiving that their masters had no regard for their temporal good, became negligent, and regardless of their employer's interests, and the only study of the servant naturally became, to do as little work, and to get as far in debt, as possible. Other masters, on the contrary, pursued a more liberal conduct, supplying their people with necessaries at reasonable rates, and paying their savings in money, and in some few instances, allowing deserving servants to take live stock in payment of their balance, which were suffered to graze with their master's, free of cost; this encouragement was no doubt, in some cases, productive of mischief, and served as a cloak for cattle stealing, and other mal-practices; but where judiciously applied under the master's own eye, was a very great indulgence,

and operated as a strong stimulus to the good behaviour of the servant, who had then something to lose by misconduct; and became much more zealous and attached to his master's service, seeing his employer had his interest and welfare at heart.

On Sir Thomas Brisbane assuming the Government, it was ordered, that all persons should, for every 100 acres of land granted to them, take and keep one convict until the expiration or remission of his sentence. On this occasion, a very important alteration was made in the relations of master and convict servant, which will be best explained by the following extract of the Government order of 11th July, 1822.

"His Excellency the Governor is pleased to order and direct, that every grantee of such land as aforesaid, shall bind himself under bonds, to be executed at the Colonial Secretary's Office, to take and receive the said convicts to dwell, remain, and serve, with him on the lands so granted to him as aforesaid, for and during the term, or until the sooner determination, of their respective sentences of transportation, and shall not at any time during the said respective terms, by day or by night, let out the said convicts, or any of them, for hire or otherwise, to any person or persons; and shall not, by the wilful default of him the said grantee, his heirs or assigns, suffer the said convicts, or any of them, to be at large away from the said lands, during the said respective terms, contrary to the intent and meaning of this Order, but shall procure and produce to the proper Officer of His Majesty's Government, when lawfully called upon, such evidence, as the nature of the case will admit, of the continued dwelling, remaining, and serving with him his heirs or assigns, on the lands aforesaid of the said convicts, (death and casualties excepted), and shall compel the said convicts to attend the public worship of God once on every Lord's day, provided such worship is performed within five miles of the residence of the said convict; and shall, during the said respective terms, provide and allow every such convict, competent and sufficient meat, drink, washing, lodging, apparel, and other things necessary for the said convict; and shall, in all things, treat them with as much humanity and care as

the nature of their employment will admit; and shall so provide for the said convicts, that they be not in any way a charge upon the said Government, but of and from all charge shall indemnify and save the said Government harmless; the expences of the religious instruction and medical care of the said convicts, and the maintenance of good order among them, alone excepted. To furnish a fund towards defraying which expences, the said grantee, his heirs and assigns, shall pay into the hands of the treasurer of the colonial revenue for the time-being, within ten days after Michaelmas-day, in every year, for every convict, the following sums, after the rate of six-pence per month, subject to the following stipulations: viz. 1st,—six shillings per annum for the religious instruction of every convict, provided that within five miles of his residence divine worship be performed every Lord's Day. 2d,—six shillings per annum for medical care, provided either that a medical officer be appointed to visit the said convicts (if sick), once at least in every week, or that an hospital be established for their reception, within fifteen miles of their residence; and 3d,—six shillings per annum for the maintenance of good order, provided that an officiating Magistrate, superintendent, or overseer, shall permanently reside within nine miles of their residence; which said sum of eighteen shillings, yearly, is to be deducted from the wages as established by the Government and General Orders of the 7th December, 1816, of the said convict, provided such convict shall not have arrived within the limits of this territory subsequently to the date of the present Government Order, or is not at present or shall not at any future period, be under sentence to serve at any penal settlement, with reference to all of whom, His Excellency the Governor is pleased to order and direct, that the grantees of such lands as aforesaid, shall be absolutely entitled to the extra work and services, that is to say, the entire work and services, of every such convict so taken with and attached to the said grant of land, without payment of any sum of money or thing in respect of yearly wages; and that therefore the Government and General Order, of date the 7th day of December, 1816, so far as relates to the payment of such yearly wages as aforesaid, be repealed as to such grant-attached convicts only."

This order is not very clearly expressed; what was meant by sufficient meat, drink, &c. being left wholly undefined; but it was generally understood, that the allowance of ten pounds per annum, was still to be continued to such convicts as had arrived in the Colony previous to the date of the order, and also to others who were not assigned by bond; which was the case with all those assigned to the old Settlers and others, not under the operation of the compulsory clause in the new grants; and that the allowance was to cease with regard to the bonded or grant-attached convicts only. Thus a very important difference was created in the relative situations of men who arrived by the same ship, very possibly under sentence for the same offence; this discrepancy put it out of the power of the majority of the Settlers to enfore the order at all, and the greater part still continued to allow the ten pounds per annum as usual. At length, under date of the 13th August, 1823, the following laconic order appeared: "The Government and General Order of the 7th December, 1816, so far as it established certain invariable charges for the various denominations of work, labour, and services described and set forth therein, is repealed."

This order completely does away with the old system, without establishing any other in its place, and thus the relation of master and convict servant was, and still continues, left in a state of uncertainty, which is a fruitful source of misunderstandings between them. It should certainly have been clearly ascertained and defined, what the convict servants were to be entitled to claim and demand as their right; and that every thing beyond that, was to be considered as an indulgence, to be extended or withdrawn at the discretion of the master, according to his estimation of the good conduct of the servant. The magistrates, with whom rests the adjustment of all differences between the masters and their servants, have generally understood the order to mean, that the claims of the convicts were to be measured by what those employed in

the Government gangs were allowed. This is merely the ordinary ration, which is frequently varied, and two suits of slop clothing annually. Every thing beyond this has been held to be an indulgence, to be withheld at any time at the will of the master. The greater part of the Settlers, however, allow their Convicts a superior ration, and other indulgences which they cannot obtain in the Government service; being well aware, that, unless their servants feel that they are decidedly better off with their masters, than they would be in the hands of Government, they will invariably prefer being in the latter situation, where they have less labour to perform, and are less closely looked after. The way, in which Convicts are maintained, differs very much upon different farms, but the following may be stated as the ordinary scale of allowance: 7 lbs. of beef or mutton, or 4 lbs. of pork, 1 peck of wheat, 1 lb. of sugar, 2 ounces of tea, 1 ounce of tobacco, per week; 2 suits of slop clothing, and 2 pairs of shoes per annum, and occasionally a sufficient quantity of soap to wash their clothes and themselves. Each hut, containing three or four men, is supplied with a bucket, iron-pot, and frying-pan; and each man is allowed a knife, tin plate, tin pint pannikin for drinking out of, and a tin pot or kettle to make his tea in. The wheat is issued to them whole, and they are furnished with a steel mill and fine wire sieve, for the purpose of grinding it, and separating the flour. The usual mode of making their flour into bread, is in what are termed *hearth-cakes*, which is thus effected:—A good fire is made up so as to heat the hearth, which should be formed of a smooth stone; the flour is then wet up with hot water into a cake, containing perhaps three or four quarts of flour; it should not be made very wet, and the outside should be dusted over with flour till it will not stick to the hands; the fire and ashes are then raked on one side, and the hearth-stone swept clean; the cake is then placed upon it and lightly covered over with hot embers

and ashes. In less than an hour, with once turning, it will be done. The bread thus made is not very light, but perfectly sweet and wholesome. This method of baking is practised throughout the Colony, by people who are unprovided with ovens. The usual method of cooking the ration of meat is by frying it in steaks or slices. Some persons, in addition to what is here stated, give their servants a daily allowance of milk; most persons allow them to cultivate some potatoes and other vegetables; but some proprietors object to this plan, and prefer supplying them with vegetables themselves; but this is sometimes neglected, and the people left without any; and where the master resides upon his farm, and the establishment is not too great, it certainly is best to allow them to cultivate their own vegetables; my own servants have always done so, and I have never found the plan inconvenient.

The convicts, on their arrival, are allowed to retain the flock mattress and blanket they have used on the passage out, which will generally serve them, without any addition, for the first year at least. The expence of maintaining a convict servant for a year, in the manner described, may be estimated as follows:

| | £. | s. | d. |
|---|---|---|---|
| 13 bushels of wheat, at 6*s.* per bushel | 3 | 18 | 0 |
| 365 lbs. of beef. at 4*d.* a lb. £.6 1 8 | | | |
| or 208 lbs of pork, at 8*d.* .... 6 13 8 | | | |
| 12 15 4 take the average | 6 | 7 | 8 |
| A frock and trowsers of the Colonial manufacture, twice a year | 1 | 10 | 0 |
| Two cotton shirts | 0 | 12 | 0 |
| Two pair of shoes | 0 | 16 | 0 |
| 52 lbs. of sugar, at 4*d.* per lb. | 0 | 17 | 4 |
| 6½ lbs. of tea, at 3*s.* per lb. | 1 | 1 | 0 |
| Tobacco, soap, and other incidental articles | 2 | 10 | 0 |
| | £.17 | 12 | 0 |

The wheat and meat are here estimated at what may be supposed to be their average value upon the farms, without the expense of carrying to market; the cost of production, however, is much less; the other articles at the prices they can usually be procured at in Sydney, including the expense of carriage to the farm. The whole calculation must, however, be understood as an estimate, and only an approximation to the truth; the price of all articles fluctuates so very frequently, that it is extremely difficult to obtain any satisfactory data on which to rest a calculation of this kind. The sum total will, however, be found to be pretty near the truth. Allowing 300 working days in each year, clear of Sundays and casualties, the expense of convict labour will be about 14*d.* or 15*d.* per diem. This amount, however, it is evident, may be considerably reduced, when the farm produces a surplus of provisions, and when many of the articles are manufactured at home, from the Settler's own produce.

Many persons, however, still continue to allow their convict servants £10 per annum, which affords the men an opportunity, if so disposed, to economize, and lay by something against the time they will be free; and also causes them to attach a greater value upon being kept in their master's service. Perhaps the best and safest plan is, to put them upon the usual allowances at first coming into the service, and to keep them upon that system for at least a year; and if in that time they prove themselves qualified and fit to be entrusted with a plough, the care of a flock of sheep, or any other situation where a degree of skill, care, and confidence are required, then to put them upon wages. They will always receive this as a very great boon; their clothes and other articles being in this case their own property, they will take more care of them; and this plan will be found to be a great stimulus to exertion, and the best security for their good behaviour. Care must, however, be taken not to extend favours too rapidly to men of this description, and to be sure that their conduct has

merited the reward before it is bestowed; otherwise, should they once conceive an idea that their services are indispensable to their master's benefit, they will very seldom be of any further use.

In the management of convict servants, the greatest care, firmness, and circumspection are necessary: this point is deserving the serious attention of every new Settler, since upon his adoption of a good system in this respect, his future success must in a great measure depend. The master should adopt a consistent and uniform line of conduct, never making himself too familiar with his people, nor yet forgetting that they are men who, though degraded, have still the same feelings and passions with himself. Those persons who have had the care and superintendence of labourers and farming servants at home, will seldom find much difficulty in managing their convict servants. Kindness will generally be found more effective than severity;—recourse must in some cases be had to the authority of the Magistrate, to punish the faults of the most troublesome; but every Settler may lay it down as a rule, that the less he has to do with Magistrates, the better it will be for his interest. By allowing them a liberal ration of good provisions and necessaries, and affording them every well-merited encouragement within his power, he will always be able, by withdrawing those indulgencies, and putting them upon a daily task, to punish their faults much more easily than by resorting to the Magistrate. In general it will be found that the belly is far more vulnerable and sensitive than the back, and that depriving men of any part of their accustomed enjoyments will be much more effectual in correcting their faults than the lash of the flogger. It is, however, extremely desirable, that the various regulations affecting the relations of master and convict servant, should be collected into one concise and familiar code, which might be printed on a sheet of paper, and stuck up in every convict's hut in the Colony, in order that they might clearly understand what were their positive rights, and what

part of their enjoyments they derived from their master's indulgence; at the same time a scale of task-labour, suited to a reduced ration, should be established. The master would then always have at his command a ready means of punishment, by being enabled to put them upon this task-labour, and reduced ration; the men being at all times at liberty to appeal to the district Magistrate, if they thought themselves aggrieved. It is true, the masters have now this power to a certain degree, but it is subject to much doubt and uncertainty, and its extent is by no means clearly defined. A regulation of this kind would save the Magistrates a great deal of trouble, and would tend very much to repress the growth of crime, and encourage reformation and good conduct among the Convicts. One most essential point in the management of convict servants is, never to allow them to quit the farm without leave; where this is not strictly attended to, they will be continually wandering about the country, forming bad connexions, and collecting idle stories and reports; equal care should be taken to prevent strangers from lurking about the men's huts, or even coming upon the farm without real occasion.

The power of the Magistrates over the Convicts is described in the following extract from an Act of the Legislative Council, dated 8th February, 1825:

"The several and respective Justices, assigned to keep the peace within the Colony of New South Wales and Van Dieman's Land, shall have power and authority, in a summary way, to take cognizance of all and every complaint made against any offender for misbehaviour or disorderly conduct, during such his term of transportation, or subsisting conviction, whether such offender be in the service of the Crown, or any inhabitant of the said Colony or its Dependencies; and upon conviction of any such offender as aforesaid, to inflict, or cause to be inflicted, such moderate punishment, either by sentencing such offender to be worked at a public tread-mill, for any number not exceeding ten days; or, to receive any number not exceeding fifty lashes; or, to solitary confinement, on bread

and water, in any place appointed for safe custody, for any time not exceeding seven days; or, to confinement and hard labour, for any term not exceeding three calendar months, according to the degree of the offence; and as the same shall appear in justice to deserve;—provided always, that nothing herein contained should be held to authorize any Justice or Justices of the Peace, within the said Colony or its Dependencies, to inflict any such punishment as aforesaid, upon such offender, who shall, or may have been assigned to, and who shall or may at the time of such misbehaviour or disorderly conduct be in, the service of such Justice or Justices as aforesaid:—provided also, that a quarterly return of all sentences, imposed by the said Justices respectively, shall be made to the Governor, or Acting Governor for the time-being of the said Colony or its dependencies;—Provided also, that this act, or ordinance, shall be and continue in force for two years, from and after the passing thereof; and then shall cease and determine."

The Courts of General or Quarter Sessions have also a further power of punishing Convicts, as may be seen by the following extract from the last Act of Parliament for establishing Courts of Justice in the Colony:

"Courts of General or Quarter Sessions shall be holden in New South Wales and Van Dieman's Land, and their Dependencies, at such times and places as the Governor or Acting Governor of New South Wales shall by his Proclamation appoint; and the said Courts of Session respectively shall have power and authority to take cognizance of all matters and things cognizable in Courts of General or Quarter Sessions in England, so far as the circumstances and condition of the said Colony shall require and admit: And the said Courts shall have power and authority, in a summary way, to take cognizance of all crimes or misdemeanors, not punishable with death, which have been or shall be committed by any felons or other offenders, who have been or shall be transported to New South Wales or its Dependencies, and whose sentences shall not have expired or been remitted: And also of all crimes or misdemeanors committed by any such felons or offenders on board of every ship or vessel during the voyage to New South Wales and the Dependencies

thereof, and the same to punish, if such Court shall see fit, by extending the time for which such persons may have been originally transported, or by transportation to such other part of New South Wales, or the Dependencies thereof, as shall or may be appointed for the reception of offenders as hereafter mentioned, and as the case may require, and by hard labour for any time not exceeding three years; and also, in a like summary way, to take cognizance of all complaints made against such felons or offenders for drunkenness, disobedience of orders, neglect of work, absconding or desertion, abusive language to their, his, or her employers or overseers, insubordination, or other turbulent or disorderly conduct, and all such offences to punish by whipping or other corporal punishment, not extending to privation of life or member, or by removal to some other part or place in the said Colony or its Dependencies, and hard labour, according to the nature and degree of such offences respectively: Provided that a return of all sentences imposed by the said Court be made to such Governor or Acting Governor aforesaid, and shall be by him, within six months, transmitted to one of His Majesty's Principal Secretaries of State in England."

Settlers in want of convict servants apply either personally or by letter at the office of the Colonial Secretary, stating the number and description of the men they require; these applications are duly registered, and when a ship arrives, the Convicts are distributed by the Colonial Secretary according to this register, with due regard to priority of application. Of course it is impossible for this officer to know the qualifications of the men, any further than from their own account; and therefore any men who, upon trial, prove to be useless, are returned, and employed in the clearing gangs or public works. The distribution is, generally speaking, made with perfect fairness and impartiality; but it is incumbent on me here to notice one practice, which is certainly very objectionable. It has been usual to allow any persons resident in Sydney, or who might happen to be there at the time a convict-ship arrived, and who had applications on the book in turn to

be complied with, to go to the master or surgeon of the ship, and procure the names of certain men whom they considered good and useful characters. This was in effect to allow the men to be picked and culled over by the residents in Sydney, or those who happened to be most in the habit of going there, to the prejudice of the industrious and persevering Settlers who staid at home, and took care of their own business; and thus a great number of the best men fell into the hands of those persons who were the least capable of making a proper use of their services. The whole distribution ought certainly to be left to the discretion of the Colonial Secretary, without suffering any one to select a single man; every person then would stand an equal chance of obtaining the most useful.

The manner, in which tickets of leave are now granted, may be understood from the following extract from the Government and General Order of 7th November, 1822:

To Convicts, under Sentence of the Law,

For { Seven Years / Fourteen Years / Life } who during { Four / Six / Eight } have served { One / Two / Three } Masters faithfully,

Tickets of Leave will be issued every Friday on producing, at this Office, a Certificate to the following effect:—

"*We hereby certify, that* A. B. *who came by the Ship* C. *which* "*arrived in the Year* D. *has not been convicted of any Crime or* "*Misdemeanor in this Colony; but is, to our certain Belief, an* "*honest, sober, and industrious Character, having served faithfully* "E. F. *residing in the District of* G. *from*———*to*———H. I. *in* "*the District of* K. *from*———*to*———*and* L. M. *in the District* "*of* N *from*———*to*———.

(signed) O. P. *Resident Magistrate;*
Q. R. *Clergyman of the District;*
E. F. *First Master;*
H. I. *Second ditto;*
L. M. *Third ditto.*"

This indulgence conveys to the Convict possessing it all the most essential privileges of a free-man, during good behaviour; it allows him to set up in business, or obtain his own living by his trade, or labour in any way he may choose, but is at any time revocable for misconduct by a single Magistrate. The Governor is also empowered to extend further indulgences, where he sees fit: viz. an emancipation, which is not revocable, and confers all the rights of a free subject within the Colony, but without liberty to quit the territory; and an absolute pardon, which allows the party to return home if he wishes it. Men, who have become free by service, are furnished with a certificate to that effect by the Governor.

The usual hours of labour are from sun-rise to sun-set, with an hour or an hour and a half for dinner. Ploughmen perform their day's work at one yoking, and are then at liberty for the rest of the day; where a considerable number of men are employed, a bell or some other signal is very useful to regulate their going to or leaving work. Some people keep a watchman about their premises at night, which is a very useful precaution in many respects; this man takes care to rouse every one in due time in the morning, and before he quits his post goes into the pasture and brings the working cattle into the yard; the ploughmen, when they come from their huts, have then nothing to do but to harness up and go to their work, which prevents a deal of lost time and much confusion.

The obtaining good female servants is one of the greatest difficulties, to which families are exposed in New South Wales; the young females of the Colony are very ill brought up, and very few of them will submit to the restraints of service, in a well-regulated family. The greater part of the female Convicts are most depraved and abandoned characters, and are oftener a nuisance in a family rather than a benefit; they are assigned to the service of individuals by application to the resident Maigstrate at Parramatta, under whose care the factory, where they are kept at work, is placed; some of them

turn out well, marry, and become decent and respectable wives and mothers of families, but the majority are of a very different description. The difficulty of obtaining good servants is one of the most serious impediments in the way of carrying on the dairy, and other branches of domestic economy, much required in the Colony. It is to be hoped the Government will turn their attention to this subject, and adopt every means of sending or inducing free-women to go out; the disparity of numbers between the sexes is at present very great, and until they are brought nearer upon an equality, very little moral improvement is to be expected in the population generally, and in the female Convicts particularly.

Persons desirous of proceeding to settle in New South Wales, should apply by letter to Earl Bathurst, the principal Secretary of State for the Colonies, Downing Street, London, for permission; in answer to this application they will receive a letter and summary of the regulations under which grants are to be made in future, as follows:

*Colonial Office, Downing Street, London.*

SIR, I am directed by Earl Bathurst to acquaint you, in reply to your letter of the that the printed Memorandum which I enclose, will explain to you the conditions upon which persons are permitted to hold lands at New South Wales and Van Dieman's Land; and if, under such circumstances, you should think it advisable to proceed to either of those Settlements, with a view to agricultural objects, the Governor will, on your making the necessary application to him for that purpose, and provided he shall be satisfied of your possessing sufficient capital to enable you to fulfil those conditions, make to you a grant of land accordingly.

I am directed further to acquaint you, that the general instructions with which the Governor has been furnished, will render it unnecessary for you, on your proceeding to the Colony, to be provided with any other letter from the Colonial department, than this.

I am, Sir,

Your most obedient servant,

R. W. HAY.

For the information of persons proceeding to New South Wales and Van Dieman's Land as Settlers, it has been deemed expedient to prepare the following summary of the rules, which His Majesty's Government have thought fit to lay down, for regulating the grants of land in that Colony.

1. A division of the whole territory into counties, hundreds, and parishes is in progress. When that division shall be completed, each parish will comprise an area of about 25 miles. A valuation will be made of the lands throughout the Colony, and an average price will be struck for each parish.

2. All the lands in the Colony, not hitherto granted and not appropriated for public purposes, will be put up to sale at the average price thus fixed.

3. All persons proposing to purchase lands, must transmit a written application to the Governor, in a certain prescribed form, which will be delivered at the Surveyor General's Office to all parties applying, on payment of a fee of two shillings and sixpence.

4. All correspondence with the Local Government, respecting grants of land, must take place through the same office.

5. The purchase-money is to be paid by four quarterly instalments. A discount of ten per cent. will be allowed for ready money payments.

6. On payment of the money, a grant will be made, in fee simple, to the purchaser, at the nominal quit rent of a pepper corn.

7. The largest quantity of land, which will be sold to any individual, is 9600 acres. The lands will, generally, be put up to sale in lots of three square miles, or 1920 acres. Persons wishing to make more extensive purchases, must apply to the Secretary of State, in writing, with full explanations of their objects and means.

8. Any purchaser, who, within ten years after his purchase, shall, by the employment and maintenance of convicts, have relieved the public from a charge equal to ten times the amount of the purchase-money, will have the purchase-money returned, but without interest. It will be computed, that for each convict employed and wholly maintained by the purchaser for twelve months, £16 have been saved to the public.

9. Lands may also be obtained without purchase, but upon different conditions.

10. Persons desirous to become Grantees without purchase, will make their application to the Governor, in writing, in a prescribed form, copies of which are to be obtained at the Surveyor General's Office, on payment of two shillings and sixpence.

11. The largest grant that will be made, without purchase, is 2560 acres; the smallest 320 acres.

12. No grant is to be made to any person without purchase, unless the Governor is satisfied that the Grantee has both the power and the intention of expending in the cultivation of the lands, a capital equal to half the estimated value of it.

13. A quit-rent of £5 per cent. per annum upon the estimated value, will be fixed upon the land granted without purchase.

14. The quit-rent will be redeemable within the first 25 years, next following the grant, on payment of a sum equal to twenty times the annual amount of it.

15. In the redemption of his quit-rent, the Grantee will have credit for one-fifth part of the sums which he may have saved to His Majesty's Government by the employment and maintenance of convicts; and for the purpose of making this allowance, it will be calculated that the Government has saved £16 for each convict, employed by the Grantee, and wholly maintained at his expense on his land for one whole year.

16. Until the expiration of the first seven years, next succeeding each grant, without purchase, no quit-rent will become due upon the lands comprized in it.

17. Every Grantee without purchase, must at the expiration of the before mentioned term of seven years, prove to the satisfaction of the Surveyor General, that he has expended in the cultivation and improvement of his land, a capital equal to half its value, as that value was estimated at the time of his grant; on failure of such proof, the land will be forfeited to the crown.

18. No additional grant of land will be made to any person who has not proved, as last mentioned, the necessary expenditure of capital on the lands already granted to him.

19. Persons receiving a second grant of land, without purchase, will become liable to pay a quit-rent upon the lands comprised in such second grant, immediately from the date of it.

20. Persons desiring to receive grants of land, without purchase, on terms different from those above stated, must lay before the Secretary of State a full explanation, in writing, of the circumstances, which they may conceive to exempt them from the fair operation of these general rules.

*Colonial Office, Downing Street,*
*November*, 1824.

The expense of a passage to New South Wales, for a grown person, may now be from £70 to £80 for a cabin-passage; and from £35 to £40 for a steerage-passage. Children are charged somewhat less in proportion to their age and the room they occupy. A man and his wife occupying only one cabin, or the same room as a single person, are charged £10 less than two single people who occupy different cabins. Passengers are entitled to put any thing they think proper into their own cabins, without paying freight; but other goods put into the hold, or any part of the ship, pay freight, at the rate of about £6 per ton. Cabin passengers mess with the Captain of the ship, and it is understood, should be supplied with a good dinner of fresh meat every day, and every reasonable comfort; including a pint of wine, and a moderate quantity of spirits and malt liquor each person. Steerage passengers are supplied with the same provisions as the ship's crew; persons who go out in this manner, will therefore do well to provide themselves with a few articles of comfort, such as wine, raisins, and preserved fruits, cheese, butter, spices, tea and sugar, &c. Ten or fifteen pounds judiciously laid out, will procure a good stock of these articles; and persons disposed to be economical, or whose funds are circumscribed, may effect a very considerable saving, by taking their passage in this manner, especially where there is a small party of friends together. But in whatever

way people take their passage, they should always see the cabins and accommodation they are to occupy, and have a proper agreement, in writing, of the nature and extent of the provisions and comforts they are to receive, before they pay their passage money, as very gross abuses have sometimes been practised in these matters. Many persons have found, to their astonishment, after being some time at sea, that the ship was unprovided with a sufficient quantity of some of the most essential articles; the prospect of a legal remedy for an imposition of this kind, is a very poor compensation for their disappointment; and even this, unless they have secured a proper agreement in writing, it is very difficult, or perhaps impossible, to obtain. The most eligible way of carrying out property for an agriculturalist, is either in sovereigns or Spanish dollars; the former bear a premium of about 14 per cent. against the Colonial currency; and dollars pass nominally at 5*s*. each, but are exchanged against sterling bills, or money, at a discount of about 14 per cent. No persons who are going out with an intention to become real Settlers, should encumber themselves with goods for sale; the markets fluctuate extremely, and they might frequently find their merchandize unsaleable, and their capital locked up from being brought into immediate use. A good assortment of articles for their own use should, however, by no means be neglected; in providing which, the following list may be serviceable;—it is calculated for a person who will possess from £1000 to £1500, clear of expense of freight and passage:

A swing plough complete, with extra gear.
Iron-work for another swing plough.
Iron axles, boxes, and tires, for two carts.
Tines for a large and small harrow.
Chains, traces, back-chains or ridgers, and iron eames for six bullocks, with a few spare ones.
Strong chain for drawing timber.

Smaller ditto, for harrowing or drawing with four or more bullocks.

Two sets of cleaving wedges, with iron rings for mauls.

Cleaving axes or knives for splitting palings, shingles, and laths.

Two or three full-sized cross-cut saws, with files and sets.

Crow-bar, stone-picks, chissels, and wedges.

One dozen strong spades.

Three or four shovels.

One dozen scoring, felling, top, and other axes.

One dozen large breaking-up, grubbing, and other strong hoes.

One dozen turnip and garden hoes.

One dozen sickles, half a dozen bean and pea-hooks.

Three or four scythes.

One dozen sheep-shears.

An assortment of the most useful and common carpenter's tools, including large augurs, shaving or drawing knives, adzes, and strong morticing chissels.

Ditto bricklayer's and plasterer's tools.

Butcher's cleavers, knives, &c.

A good and a common saddle and bridles, &c.

Hand-mill and flour-sieves, or bolting machine.

Wire sieves, or a winnowing machine for clearing corn.

Churn, sieves, or other utensils for a dairy.

Small scales and weights and strong steelyards.

Locks, bolts, and hinges, for house, barn, and stable-doors.

A moderate assortment of china, glass, and kitchen utensils.

Iron pots of various sizes, and frying-pans.

A good stock of linen, bedding, and clothes.

Nails, spikes of four or five inches, especially the former; three-inch nails for rafters, &c.; batten or eight-penny; single or stout four-penny; flooring brads; four or five cwt. of spikes, will not be too many; the next in point of utility are batten and shingle-nails.

The following can be be better procured at Sydney:

Tables, chairs, and the more bulky articles of furniture.

Buckets and other cooper's ware.

Cream dishes for the dairy and other common earthenware.
Harness and leather articles.

All edge-tools, or other articles that are liable to rust or spoil with salt water, should be packed in good cases lined with tin, which can be worked up into tin pots, and other articles for the use of convict servants and other purposes. A thrashing machine is a very useful implement, where people have sufficient employment for one; but no new Settler can make use of a machine of that kind, for the first two or three years, and as it is an expensive and bulky article, it will be better not to be encumbered with one. It is possible there may be some very useful articles omitted in the above list; but every thing that is not absolutely necessary, should be dispensed with, as the freight, and the cost of removing such things after they arrive in the Colony, will be productive of continual expense, while they will be only so much capital lying dead and unproductive, which might have been profitably invested in live-stock, or employed in improving the Settler's farm.

On his arrival at Sydney, the Settler should lose no time in selecting his grant, and commencing his operations upon it. Many and great will be the difficulties and privations of his first commencement, but he must make up his mind to grapple manfully with them, and suffer no considerations of ease or pleasure to turn him aside from the steady prosecution of his enterprise. Every day that he loiters away in idleness will take something away from his means of carrying his design into execution, while the ultimate accomplishment of his purpose will still be as distant as ever. The sooner a person sets about the earnest execution of his project, the sooner will he get his comforts around him, and the greater will be his hope of success. There are no difficulties that a man of common resolution and energy of mind may not overcome; the chief requisite is, that a Settler should have a competent knowledge of rural affairs, and a taste and

fondness for a country life and occupations. Those who cannot content themselves at home, but must be continually absenting themselves for the purpose of partaking in the more extended society and dissipation of the towns, can seldom expect to do any good. Strangers, upon their arrival in the Colony, should be extremely cautious what intimacies and connections they form; upon their prudence in this respect, their future respectability and consequence must in a great measure depend. A very short period, with common observation, will let them into a knowledge of the characters of different individuals, and they will be in little danger of forming improper associations after that. They must be cautious whose advice they listen to, and consider whether the parties have not some interested motives for their council. The choice of their grant must in great measure be regulated by the extent of their capital and the object they have in view. Many circumstances are to be considered in choosing a tract of land; its situation with regard to markets, seaports, or navigable waters; whether the soil is good, its fitness for the purpose of agriculture and grazing; whether much labour will be requisite in clearing and enclosing it; whether it abounds with good water and building materials; whether it is easy of access; and whether it is likely to lie in the way of any great thoroughfare; all these and other circumstances must be duly considered and examined before the Settler comes to a decision. Many large tracts are now open to emigrants in the various new Settlements, but I must decline giving any opinion as to which should have the preference. The new Settler should make his choice from personal inspection, and a due consideration of the extent of his capital, and the objects he has in view.

# SUPPLEMENTARY CHAPTER.

TRADE AND MANUFACTURES—CIRCULATING MEDIUM—ROADS—TRAVELLING—CLIMATE—REVENUE—POLICE—MILITARY FORCE—CHURCH AND SCHOOL ESTABLISHMENT—CIVIL GOVERNMENT AND ADMINISTRATION OF JUSTICE—BLACK NATIVES.

THE Colony now carries on a very considerable commerce with the mother country and other places; but I am not at present in possession of proper means for entering into any detail on the subject; its imports may perhaps amount to £250,000 per annum; they consist of almost every article of British manufacture, besides wines and spirits of all kinds, and a considerable quantity of sugar from the Isle of France, and tea and other articles from China. The principal part of its return is still made in the bills drawn by the local Government, for the pay of the civil and military establishments, and in payment of supplies furnished for the subsistence of the troops, and the Convicts in the service of the crown. Its exports are continually increasing both in number and amount; their value may now be about £60,000 per annum, consisting of wool, timber, hides, seal-skins, whale and elephant oil, and a few other articles. The coasting trade of the Colony is now, also, becoming very considerable, and as new Settlements are forming further northward, where different productions will be raised, this branch

of the Colonial trade will every year become of more importance. The only manufactures in the Colony worth mentioning are those of coarse woollens, leather, earthenware, and salt. The coarse woollens are known in the Colony by the appellation of Parramatta cloth, having been first made there; considerable quantities of it are made by many of the Settlers, as well as by persons who obtain their living by the manufacture; it is sold at about 2*s.* 6*d.* per yard of four quarters wide, and is much used and esteemed as clothing for labouring men; there is also a superior description of cloth made at a factory near Sydney. Leather of a good quality is extensively manufactured in the Colony, especially by Mr. Wiltshire, of Sydney, who employs a very considerable capital in the business. Very good common earthenware is made at Sydney, and Settlers may supply themselves with milk-pans, cream-jars, and all other articles of this description, much cheaper there than they can procure them from England. Salt is manufactured extensively, and sold at 7*s.* per cwt. Good grindstones are made at Parramatta and Sydney, and sold at 5*s.* each.

The Bank of New South Wales possesses a capital of £20,000, held in 200 shares of £100 each. Its affairs are managed by a President and six Directors, chosen by ballot from among the Proprietors. This establishment was commenced in 1817, and has been found a most useful institution; its promissory notes, drawn for a certain number of Spanish dollars, form the principal circulating medium of the Colony, and are always convertible into that coin at the pleasure of the holder. The transactions of this company are principally confined to discounting bills of short dates, for which they are allowed a discount of £10 per cent.; they also deal in treasury bills and other Government securities, and act as a bank of deposit. Some small part of their capital has, I believe, been lent out on mortgage of landed estates, but the amount is very trifling.

In the early periods of the Settlement, the circulating medium was principally supplied by the notes of individuals; every trader constituted himself a Banker, and issued his promissory notes, which were denominated *currency* of various values. The bills of the local Government, drawn on the British treasury, are negociable securities, and were then, and are now, much used in making payments. When it was required therefore to exchange the Colonial currency against sterling bills of this description, the former was always exchanged at a discount, which sometimes amounted to 50 or 100 per cent. Upon the establishment of the Bank in 1817, the Colonial currency was suppressed; and from that time until the year 1822, the notes of the Bank, which were drawn for sterling, and were always convertible at the pleasure of the holder into sterling Government bills, continued to form the principal circulating medium. A quantity of dollars had been brought down from India a few years previous, and by authority of the local Government, a piece was struck out of the centre of each; this centre piece was called a dump, and was put into circulation at fifteen-pence sterling value; the remaining part, or outside ring, was put into circulation at five shillings value; both parts were stamped with a suitable impression, and were always received and exchanged by the Commissary for sterling bills at those values; they thus formed a very convenient medium of exchange in lesser transactions, and few counterfeits were attempted, it not being very easy to carry such practices into effect in so small a community. A considerable quantity of Spanish dollars was also in circulation, which were brought in from time to time by new Settlers and others, and passed at five shillings each; there was also a considerable quantity of English silver coins, Bengal rupees, and many other descriptions of silver coins, which passed at various values by tacit and general consent. The drafts of the Commissariat Officers at the out-stations, termed store-receipts, upon the

Commissary at Sydney, for supplies furnished at those stations, were negociable instruments, and were much used in making payments. The circulating medium of the Colony was thus always of a sterling denomination and value, and was established upon as secure and certain a basis as could be expected, or perhaps desired, in a Colony of such very recent formation. In this state things continued until the year 1822, when the Local Government adopted a measure, which completely deranged the whole system previously in operation, and introduced the greatest confusion and discontent throughout the Colony. I am not now in possession of materials to enable me to give a proper history of this transaction, which it is to be hoped some gentleman, well acquainted with the subject, will yet oblige the public with; the particulars here stated may, however, enable a person to understand how exchanges were effected when I left the Colony, in February, 1825. A very large quantity of Spanish dollars was imported by the Local Government from India and China, in 1822, and they were paid away by the Commissary at 5*s.* each; the persons who received them unwittingly signing receipts for sterling value to the amount of their claim thus satisfied; this they very readily did for a time without suspicion, as the Spanish dollar had hitherto, as before observed, passed by tacit consent for that value; the quantity, however, thus surreptitiously put into circulation, at length began to attract notice and enquiry; the iniquity of the system was at once manifest, and the Merchants came to a resolution to receive dollars at their intrinsic value of 4*s.* 2*d.* each only. Thus the holders of dollars, many of whom had signed sterling receipts for them at 5*s.* each, were completely defrauded out of one sixth, or 16$\frac{1}{2}$ per cent. of their property. The Commissary refused to exchange the dollars for Treasury bills, at the value they had been issued at; and these bills were from this time, and still continue to be, sold by tender in the following manner: by advertisement

in the newspapers, the Commissary gives notice, that on a certain day, he will be ready to receive tenders for the purchase of bills to be drawn on the Lords of the Treasury, in exchange for Spanish dollars. The dollars are received at 5*s.* each, with a discount upon them, which varies according to the demand for bills among the Merchants for the purpose of remittance. At the time I left the Colony, the premium upon bills, or, in other words, the discount upon dollars, was 14½ per cent.; that is, a person to obtain a sterling bill upon England for £100, must pay £114 10*s.* in Spanish dollars at 5*s.* each, or 458 dollars. Thus the system has been introduced and perpetuated: the dollars would have been soon sent away as remittances; but by this expedient of selling the bills, a certain quantity of them is sure to be retained in the Colony. The necessity of retaining the greater part as a circulating medium has, however, been obviated by the Bank having issued their promissory notes, payable on demand, for a certain number of dollars, so that any quantity that may be put into circulation beyond what is necessary to carry on the exchanges between the Commissary and the Merchants, is sure to be exported. The Government have, therefore, gained very little by the measure, while the nefarious manner in which it was introduced, has for ever destroyed the confidence of the public in the integrity of the present Government: many other ramifications of this system may also be noticed; thus the dollars were issued to the troops for their pay at 4*s.* 8*d.* each; the Government colonial dues and duties were paid at the discount of the day; the salaries of the civil officers, payable from the colonial revenue, were paid in dollars at 4*s.* each. Thus the greatest confusion prevailed, the Commissary issuing dollars at one value; the collector of customs or naval officer, and colonial treasurer, receiving them at another; the troops at a third; and the civil officers at a fourth rate; and this system of confusion prevailed up to the period of my leaving the Colony. Private bargains

are generally, however, made in what is termed currency, that is, the Spanish dollars at 5*s*. each; and all the prices of labour, live-stock, and other articles mentioned in this work, are to be understood as calculated in this manner. Accounts are now generally kept in dollars and cents, but the dollar is continually fluctuating in value, and no man can with certainty measure the extent of his income, or the value of his property. Since I left the Colony, a considerable quantity of silver coin, struck expressly for the Colonies, has been sent out from England, to be put into circulation; and it is therefore probable, the old system of sterling payments and accounts will be again resorted to.

There is still a good deal of buying and selling effected by way of barter, but this system is not so much owing to any want of money, or secure circulating medium, as to the infant state of society, and the imperfect division that has yet taken place in trades and employments. The farmers are obliged to be shopkeepers, to a certain extent, for the purpose of supplying their own men, and have therefore no objection to receive goods in part payment for their produce. The millers are, also, frequently general merchants and dealers, and receive grain in payment for goods. Bargains for grain, wool, or other produce, are frequently made at a certain price to be paid half in money and half in *property*: i. e. such goods as the seller may require, or as may be mutually agreed upon. This barter system, in the present state of the Colony, is productive of many advantages to all parties, and obviates the necessity of middle men. Fat stock, however, is invariably disposed of to the butchers for money. Dairy produce is frequently sold by commission salesmen, except fresh butter, which is mostly sold in open market.

The leading roads from the capital, in all directions, are now very good; at first they were made in an imperfect manner, being nothing more than the new earth thrown up

into the form of a road; of course they possessed very little durability, and the traffic upon them in wet weather cut them up entirely; of late, large portions of them have been covered with good durable materials on Mr. Mc Adam's principle, and the leading roads from Sydney, to all the most considerable places in the interior, are now as good as any roads in England. The expense of forming these roads has been defrayed by the Government, who have erected gates upon the principal roads, where a moderate toll is collected towards the expense of keeping them in repair. In the more recently settled parts of the country, the roads are in many places very bad, and the passage of the rivers and creeks is extremely difficult and dangerous: these roads are in fact nothing more than mere tracks, that have generally been formed by people who have settled themselves, or taken possession of a grazing run beyond the occupied part of the country. Having ascertained the most practicable route to the spot they intend to occupy, the track is marked out by cutting pieces out of the bark of the trees along the line; this service is very frequently performed by black Natives, who have a most accurate local knowledge of the country; the track thus marked is followed by such as have occasion, and becomes a beaten path, and at length a road.

Stage coaches have recently been established from Sydney to all the most considerable towns in the interior; they are furnished with good horses, travel at a good pace, and charge moderate fares; many persons keep curricles, gigs, or other vehicles, which, not being subject to any taxes, are supported at a small expense, especially by persons who reside in the interior and have plenty of horse-food. In the more distant part of the country, where there are no regular made roads, the most useful method of travelling is on horseback. There are very good Inns in the towns, and also on the principal roads for a considerable distance into the interior; but in the newly settled districts, it is frequently neces-

London. Published June 1828, by J. Cruse, 18 Holbern opposite Furnivals Inn.

sary for travellers to carry their provisions and bedding with them; the Settlers in general are extremely hospitable and civil, and will readily receive strangers into their houses, and afford them the best accommodations in their power. Some persons travel in light tilted carts, furnished with a bed and other accommodations; they generally carry their provisions and cooking utensils with them, and stop at any place on the road at night, where they can find water and grass for their horses or bullocks. Excursions are frequently made by the more enterprising Settlers, into the unexplored districts in the interior, sometimes merely for the sake of gratifying their curiosity; at other times in search of grazing runs for their stock, or eligible situations to take a grant of land; and frequently for the purpose of hunting the Kangaroo and Emu. Some of the black Natives are usually procured as guides, they having a most intimate knowledge of the localities of the country. The party is provided with a proper stock of provisions, spare linen, and other necessary comforts, which are carried on pack-horses; each person carries his blanket under his saddle, and generally a great-coat or boat-cloak strapped before him, with a light tether rope coiled round his horse's neck; the fowling pieces are usually carried by the black guides; and thus provided, a party may travel with ease and safety any distance their provisions will allow. At night a spot is selected for an encampment, or rather bivouac, where there is water and food for their horses, with plenty of dead wood for firing; the horses are then tethered out, or tied to a piece of wood which they can draw about after them; the black Natives strip some bark off the nearest trees that will suit the purpose, and construct a hut sufficiently large to shelter the whole party, with their baggage, arms, and saddles, from the weather; this they will execute in half an hour with ease; in the mean time others of the party kindle a fire, put on the kettle to boil some tea, and commence preparing supper; care is taken to collect sufficient

wood to keep the fire up through the night, and if the ground is damp, some strips of bark are dried and laid upon sticks, to raise them a few inches off the ground, to sleep upon; in this way journies into the unoccupied parts of the country may be performed with safety and comfort, while the weather is fine. I have performed many long journies in this manner myself, without any other attendants than two black Natives, on whose fidelity I could rely. If the object of the party is to explore the country, little is to be expected from the game they may kill towards the holding out of their provisions, as the pursuit of game is apt to disperse the party and obstruct their progress; but where the party goes out for the purpose of hunting, provided with proper dogs, it is unnecessary to carry any animal food with them, except perhaps a little fat pork or bacon. Persons engaged in these parties rarely feel any ill effects from sleeping on the ground in this fine climate, where coughs and colds are almost unknown. It is unnecessary for me to go into any detail to prove the excellence of the climate of New South Wales, its salubrity being well known and universally admitted. An inspection of the following table will shew the state of the weather from April 1823, to March 1824, which was a remarkably dry and hot year:

London, Published June 1826, by J. Cross 18 Holborn, opposite Fetter

| Year and Month. | Barometer. | | Thermometer. | | Hygrometer. | | Rain at the surface of the Earth. | Prevailing Winds. |
|---|---|---|---|---|---|---|---|---|
| | Max. | Min. | Max. | Min. | Max. | Min. | | |
| 1823. | Inches. | Inches. | Degrees. | Degrees. | Deg. | Deg. | Inches. | |
| April .... | 30,458 | 29,772 | 98 | 49,5 | 78 | 40 | 7,215 | Variable. |
| May ..... | 30,442 | 29,602 | 74 | 35 | 79 | 26 | 0,556 | S. W. & Westerly |
| June ..... | 30,350 | 29,290 | 70 | 33 | 78 | 25 | 2,590 | Westerly. |
| July ..... | 30,115 | 29,840 | 66 | 28 | 76 | 27 | 5,618 | W. & N. W. variable. |
| August .... | 30,248 | 29,488 | 70 | 32 | 78 | 29 | 0,752 | S. E. & S. W. |
| September.. | 30,380 | 29,520 | 86 | 37 | 79 | 18 | 0,576 | S. E. |
| October .. | 30,200 | 29,300 | 91 | 42 | 80 | 20 | 2,812 | Variable. |
| November.. | 30,220 | 29,860 | 89,5 | 45 | 76 | 40 | 1,688 | N. E. E. & S. E. |
| December.. | 30,110 | 29,530 | 101 | 50,5 | 72 | 30 | 0,493 | N. W. & S. E. |
| 1824. | | | | | | | | |
| January .. | 30,300 | 29,430 | 105,2 | 53 | 68 | 9 | 1,576 | N. W. & S. E. |
| February .. | 30,300 | 29,680 | 102 | 49 | 75 | 35 | 1,125 | Easterly. |
| March .... | 30,490 | 29,580 | 97 | 44 | 74 | 10 | 1,988 | Westerly. |
| of the whole Year. | 30,490 | 29,290 | 105,2 | 28 | 80 | 9 | 26,989 | |

Mean Temperature of Twelve Months, by a self registering Thermometer=64° 4—

N. B. Zero of the Hygrometer indicates the greatest Drought.

The revenue raised in the Colony is principally derived from an ad valorem duty of £15 per cent. upon all commodities imported that are not of the growth or manufacture of the United Kingdoms of Great Britain and Ireland; from duties upon spirits, wines, and tobacco; from licences for retailing wines and spirits; toll collected upon the public roads; and a few minor articles. The amount has fluctuated much of late, in consequence of the rates of the several duties having been frequently altered; the average amount for the last few years may perhaps be stated at about £50,000 annually. This money is applied, at the discretion of the Governor, in paying the salaries of some of the civil officers, in the support of the police, and other matters.

The police of the Colony, though it has recently received many improvements, is still very defective; the selection of magistrates in the interior, is not always the most happily made. Persons of real merit, well qualified for the office, and of comparatively independent fortunes, being frequently passed over to favour others who have more personal interest with men in power. Some little pecuniary benefit is derived from serving this office, which is much to be lamented, since its amount is not sufficient to become an object to any man who has a due amount of property at stake in the Colony to entitle him to the distinction. It is true, the magisterial office brings a considerable degree of trouble, and some little expense, to its possessor; but most persons will probably agree with me, that no gentleman is duly qualified for this office, whose fortune does not place him above receiving any pecuniary benefit from it. Considerable difficulty has been experienced in procuring proper persons to execute the office of constable; their remuneration is insufficient to induce men of good character to devote their whole time to it, although their situation has been much improved of late; more liberal rewards for the apprehension of offenders should certainly be given; the number of runaways at large in the bush, at all

times great, has been very considerable lately; they principally consist of deserters from the clearing gangs, and from the Government farm at Emu Plains; which, though situated in the centre of a populous district, and wholly unprovided with any means of preventing desertion, has most imprudently been made a place of punishment for trifling offences, and subjected to a very strict system of discipline. Run-aways or *Bush-rangers*, as they are termed, are advertized every week in the Gazette; and on their apprehension, a reward of one dollar is paid for every time they have been so advertized; this unwise system has been the very means of protecting them, since the constables, even though they know their haunts, would never look after them until they were worth catching. The black Natives frequently capture offenders of this description; and, were they liberally rewarded, would rarely suffer any to be at large, as from their superior local knowledge of the country, and wonderful expertness in tracing footsteps or other marks, they are better qualified than white men for undertakings of this nature.

The military force stationed in the Colony, including those detached in Van Dieman's Land, consists of two regiments of infantry. Too many of the troops are kept in Sydney, where they are not much wanted, as the number of Convicts now employed there is inconsiderable; the establishment of a few military posts, of from ten to twenty men, in different parts of the country, would be very beneficial, and greatly assist the police; no difficulty exists in victualling them, which could always be done by contract with some of the Settlers in the neighbourhood; and if the detachments were frequenly changed, their state of discipline could suffer little injury. The head-quarters of the troops might probably be much more conveniently situated at Paramatta than at Sydney; the several detachments might then be relieved with more facility, and the principal body of military would be nearer those parts of the country where the greatest number of Convicts is employed.

The salaries of the colonial chaplains, at the head of whom is an archdeacon, under the diocese of Calcutta, are paid by an annual grant from Parliament. The churches are supplied with ministers, who are sent out by the British Government; and it affords me great pleasure to say, that the church establishment consists of men who are distinguished by the usefulness and regularity of their lives, and assiduous attention to their sacred calling. There are also two Roman Catholic chaplains, who are allowed salaries by Government, and who are not less distinguished for their private worth and zeal in their profession. The missionaries, sent out by societies in England, are very respectable men, and are extremely useful and diligent. Public shools have been established in various parts of the country, where the advancing state of the population required it; one-eighth of the whole colonial revenue is applied to this purpose, and to the support of the two very flourishing institutions for the care and education of male and female orphans.

The Civil Government of the Colony is vested in the Governor, and the Legislative in the Governor and Council, who have authority to make laws for its benefit. The criminal court still retains the appearance of a military tribunal; but the courts of quarter-session, which are held in various parts of the Colony, have grand and petty juries, and are conducted altogether on the model of similar courts in England. The whole system of Civil Government and administration of justice will, however, be better understood by the following abstract of the Act 4 Geo. IV. cap. 96:

"An Act to provide, until the 1st day of July, 1827, and until the end of the next Session of Parliament, for the better administration of Justice in New South Wales and Van Dieman's Land, and for the more effectual Government thereof, and for other purposes relating thereto."

Section 1. His Majesty authorised to institute Supreme Courts of Criminal and Civil Jurisdiction in New South Wales and Van Dieman's Land.

2. Jurisdiction of such Courts.

3. The Supreme Courts in New South Wales and Van Dieman's Land to have jurisdiction over piracies and offences committed at sea, or in New Zealand, and other places in the Indian or Pacific Oceans.

4. The trial of crimes and misdemeanors, recognizable in the said Courts, to be prosecuted by information, and tried by the Judge and seven Officers of the Army or Navy.

5. His Majesty may hereafter institute other Criminal Courts in any new Settlements.

6. Trial of Actions at Law to be by the Chief Justice and two Magistrates, unless the parties shall desire to have a jury.

7. Qualification of jurors.

8. His Majesty, by Order in Council, authorised hereafter to extend the trial by jury.

9. Courts to have equitable jurisdiction.

10. Courts to have ecclesiastical jurisdiction.

11. Courts to issue foreign attachments.

12. Where the cause shall exceed £500, and shall not be tried by a jury, the evidence to be taken in writing.

13. Parties allowed to appeal to the Court of Appeals, where the cause of action shall exceed £500.

14. Appeals may be allowed by the Judges, where the cause of action shall be less than £500, in certain causes.

15. The Governor to hold a Court of Appeals. To be assisted by the Chief Justice of New South Wales in appeals from Van Dieman's Land.

16. Appeals to his Majesty in Council to be regulated by Charter.

17. His Majesty to make rules and orders for the conduct of all business in the said Courts.

18. Regulations as to opening the Supreme Courts. When the new Judges shall have actually entered upon the exercise of their jurisdiction, the old Courts to cease.

19. Courts of Quarter Sessions to be held, and the authority thereof extended.

20. The Governor to institute Courts of Requests, and such Courts to determine all civil suits under £10

21. The Governor, with the assistance of the Chief Justice, to settle Rules and Fees to be followed and taken in the Courts of Sessions and Requests.

22. Provision for declaring Insolvencies, and distributing the effects of Insolvent Persons in New South Wales.

23. Regulations as to granting Certificates to Insolvents.

24. His Majesty to constitute a Council in New South Wales; and the Governor, with the advice of such Council, shall have power to make laws for the government of the said Colony.

25. In case of actual or apprehended rebellion or insurrection, the Governor to make laws for suppressing the same, though all the Council dissent.

26. His Majesty in Council may make and establish any law, which may have been dissented from by the Council in New South Wales.

27. No tax or duty shall be imposed by the Governor and Council, except for local purposes.

28. 59 Geo. 3, c. 114, and 3 Geo. 4, c. 96, allowing certain powers of taxation to the Governor, made perpetual.

29. No law is to be passed until a copy shall have been laid before the Chief Justice, and his certificate given thereupon.

30. Laws made by the Governor, &c. within six months from the date thereof, to be transmitted for his Majesty's approbation.

31. Laws to be laid before Parliament.

32. Members of the Council to be Justices of the Peace. Oath to be taken.

33. Regulations as to any vacancy in the Council.

34. All instruments, whereby the Governors of New South Wales have remitted the term of transportation of felons, to have the same effect as pardons under the great seal in New South Wales, and (if ratified by the Secretary of State) in England.

35. Regulations as to remissions of time of transportation in future. To be transmitted to the King, and, if approbation signified, to have the effect of a pardon under the great seal in New South Wales only.

36. Persons under sentence of transportation, who shall be convicted of offences punishable by transportation, may be detained in New South Wales or its dependencies for the same terms for which they might have been transported.

37. Surgeons of convict ships may inflict moderate punishment on convicts guilty of misbehaviour.

38. His Majesty to appoint places for the reception of offenders; and to prohibit trading vessels from holding intercourse with such places.

39. Persons assisting in the escape of felons to be deemed guilty of a misdemeanour.

40. After 30th of June, 1824, the provisions of 2 Geo. 2. c. 36, extended to New South Wales

41. Artificers and others may contract, by indenture, to serve any person in New South Wales, for any term not exceeding seven years.

42. Persons, with whom any such artificers, or others, shall have contracted to serve, may maintain action against any person employing or harbouring them.

43. Court of Sessions, or Justices of the Peace, to punish violation of such indentures, and to determine differences.

44. His Majesty may hereafter erect Van Dieman's Land into a separate Colony, with distinct jurisdiction, after which, appeal from Van Dieman's Land to Governor of New South Wales to cease. After such order, the Governor of Van Dieman's Land may remit sentences, &c.

45. Duration of the Act.

My limits will not allow me to go into any detailed account of the manners and customs of the black Natives, although the subject affords a wide field for curious remark; those persons who wish for further information, may consult the work of Mr. Collins, which contains the best description of them hitherto published. It will be sufficient here to say, that they are a mild, cheerful, and inoffensive race; they are a mere nation of hunters, passionately fond of their wandering life, and averse to labour of every kind; they have very little jealousy of strangers, and live among the Settlers on terms of perfect amity and confidence. Quarrels have indeed sometimes occurred between them and the white people, but on candid enquiry it will be found they have seldom been the

original aggressors; unable to bear the continual ill treatment of the unprincipled herdsmen and shepherds in the interior, who, in cases that have come within my own knowledge, have taken away their women by force, and otherwise wronged them, they have at length been roused to revenge; mutual acts of hostility and retaliation have taken place, by which many innocent persons have suffered, and the property of the proprietors of flocks and herds in the interior has been exposed to much danger. On a late occasion, this state of hostility had got to such a length in the neighbourhood of Bathurst, that the Government were obliged to interfere; martial law was proclaimed; the local Magistrates exerted themselves to restore order, and after a short time, peace and tranquillity were happily re-established. In all the country eastward of the Blue Mountains, and in the county of Argyle, and country to the southward, not the slightest disturbance has taken place for many years; and from the manner in which the Natives are now intermixed and connected with the Settlers, there is not the most remote cause to fear that any serious differences will arise.

FINIS.

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